

FIG.1A

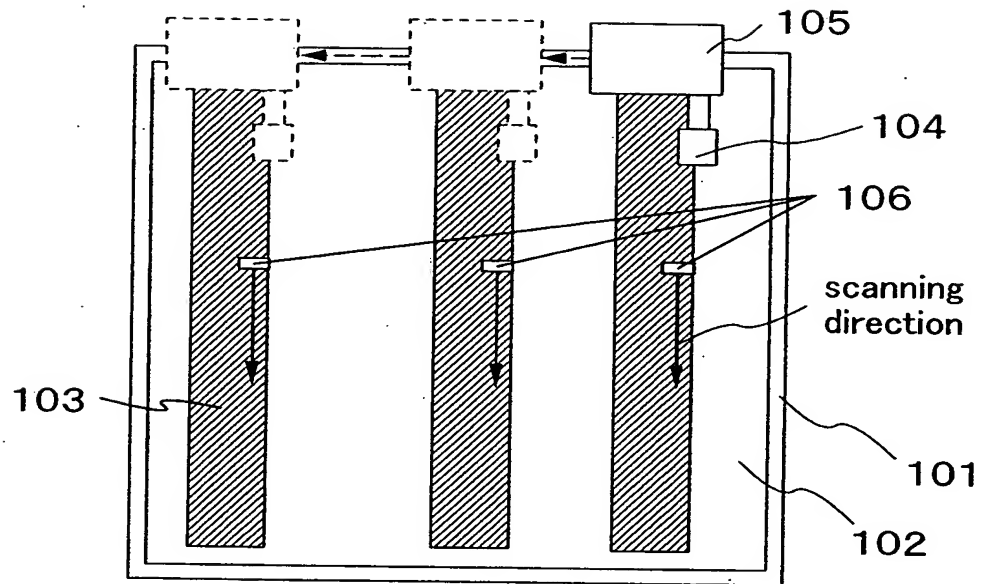


FIG.1B

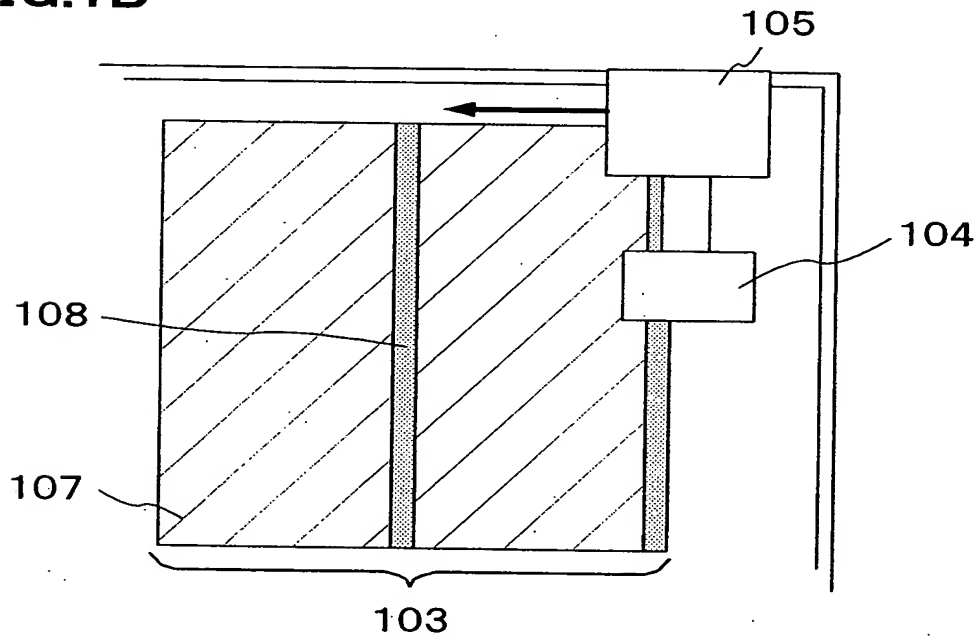


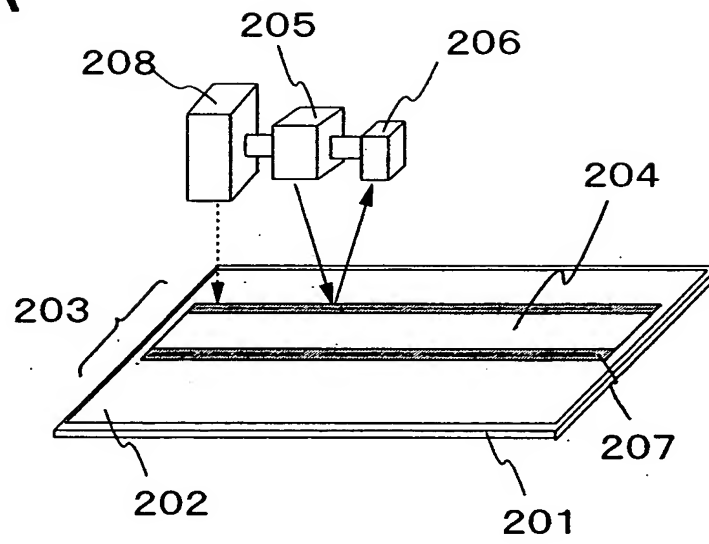
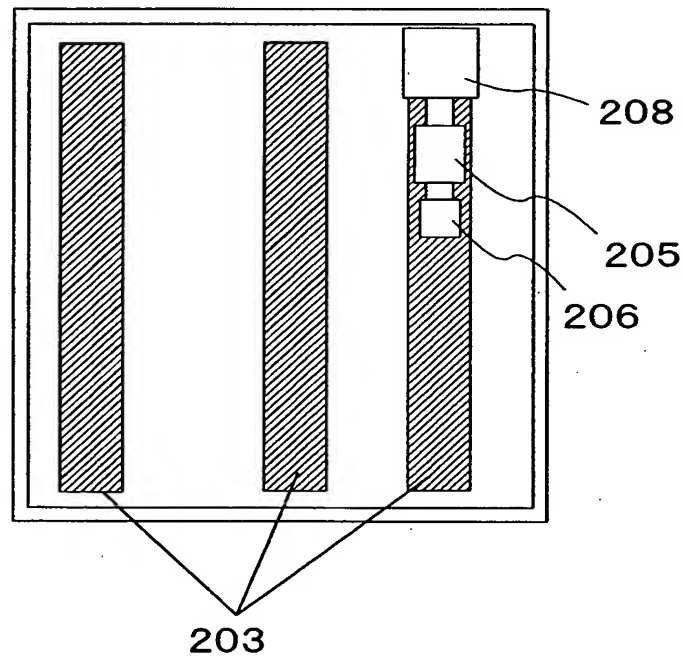
FIG.2A**FIG.2B**

FIG.3A

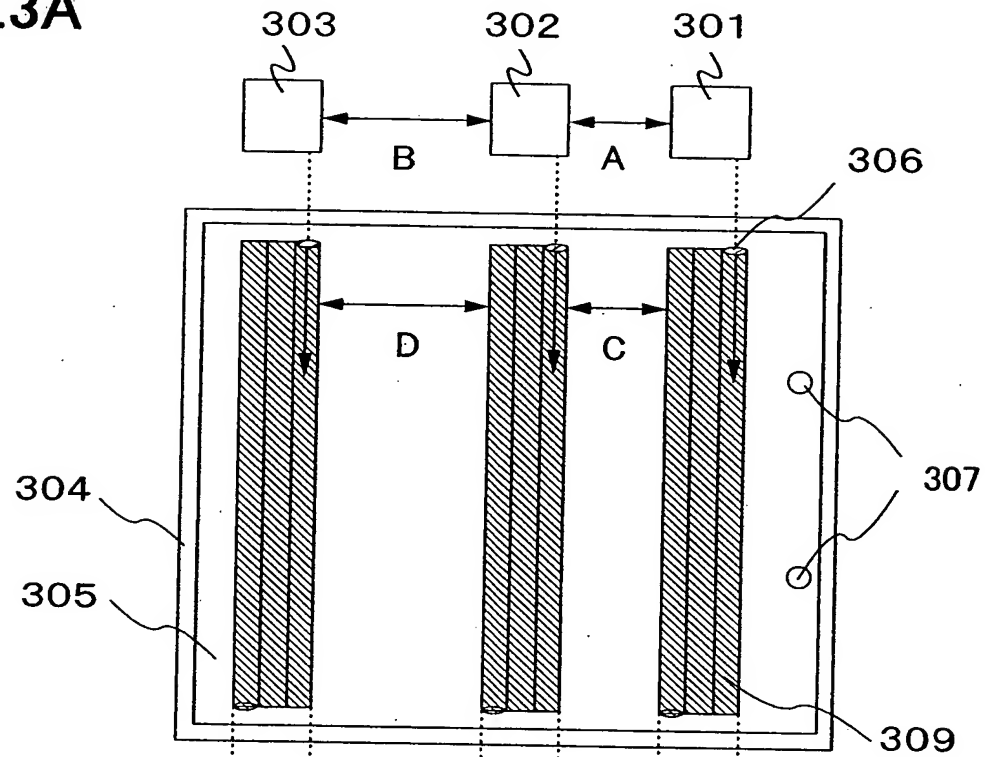


FIG.3B

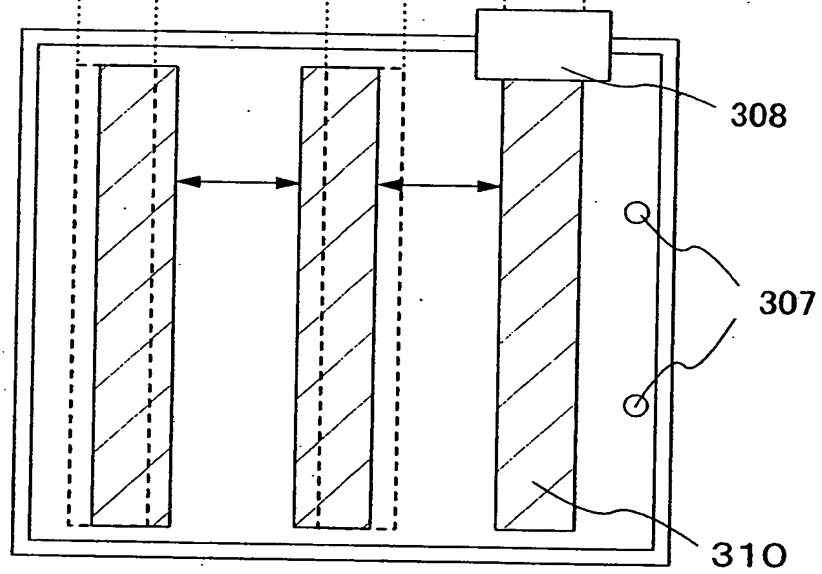


FIG. 4

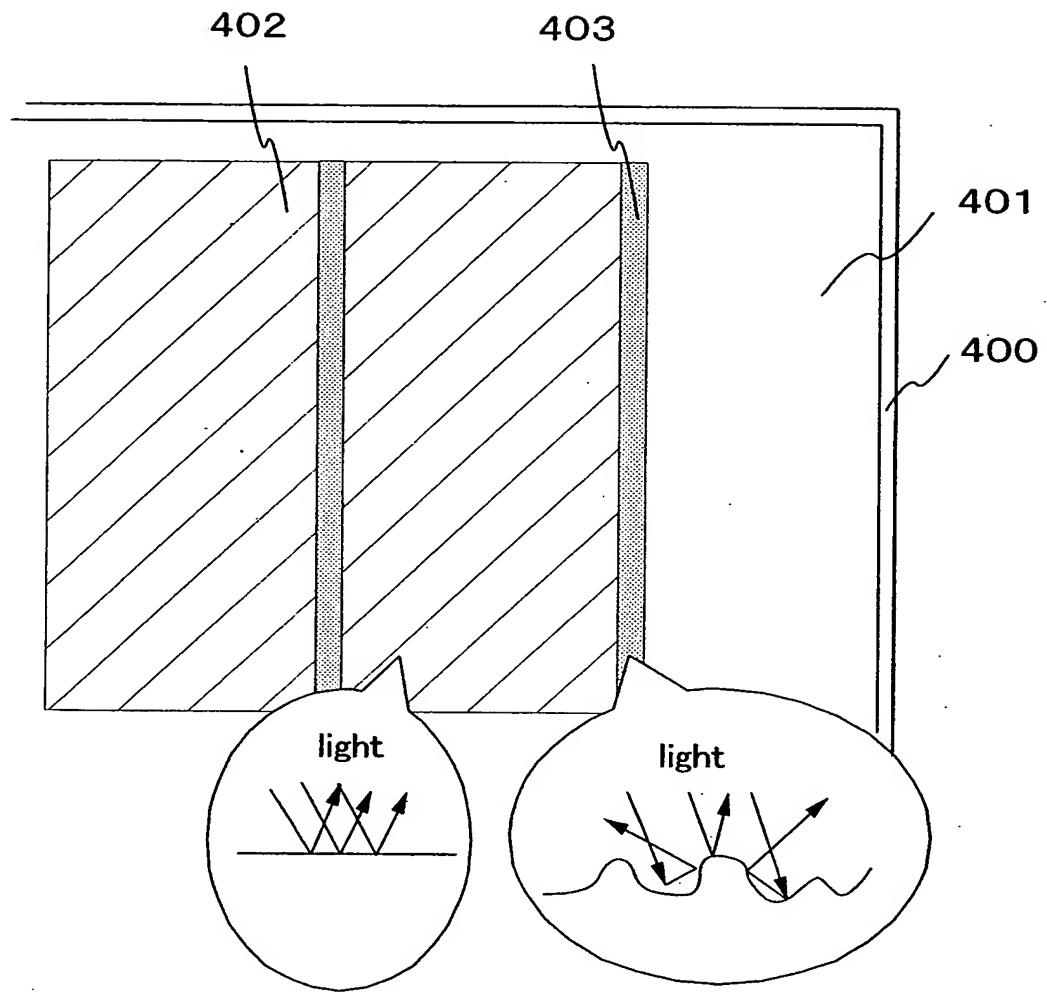


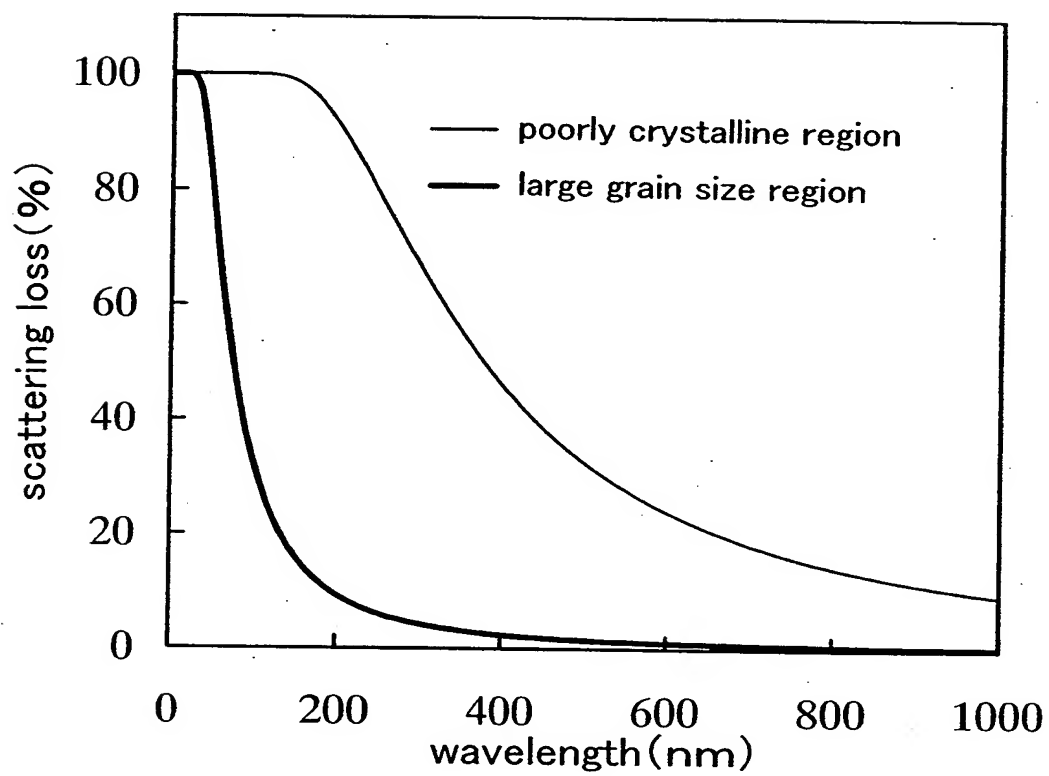
FIG.5

FIG.6A

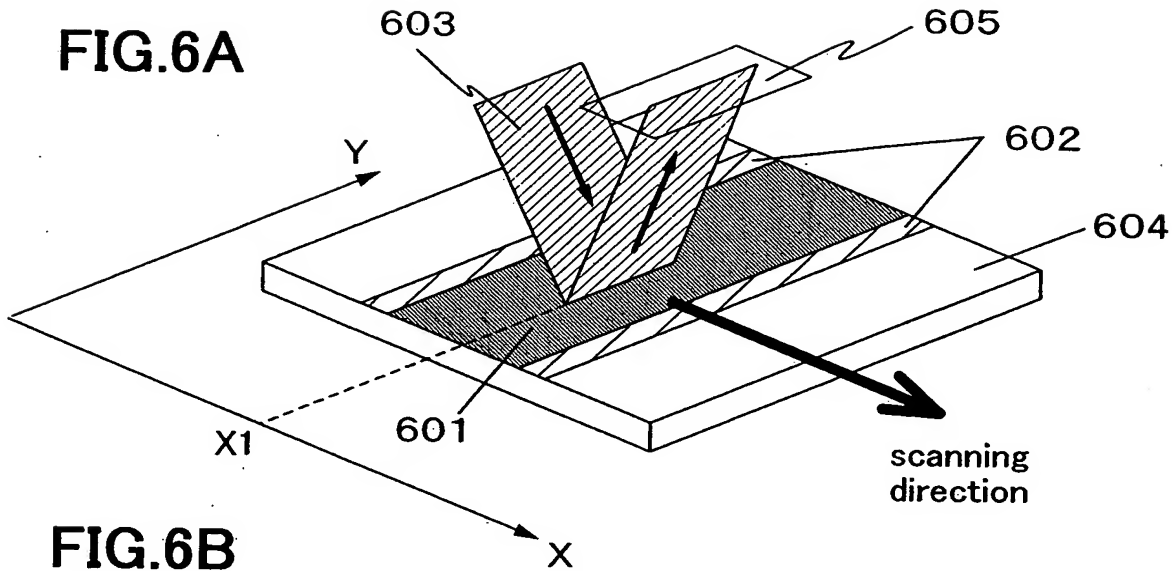


FIG.6B

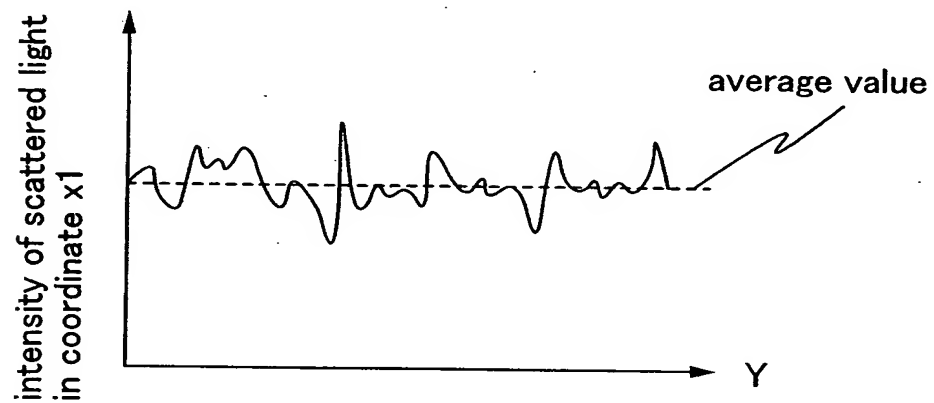
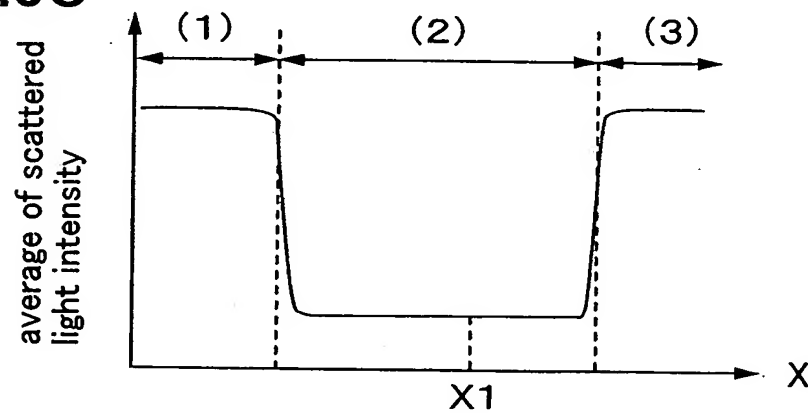


FIG.6C



(1)、(3) : large grain size region
 (2) : poorly crystalline region

FIG.7A

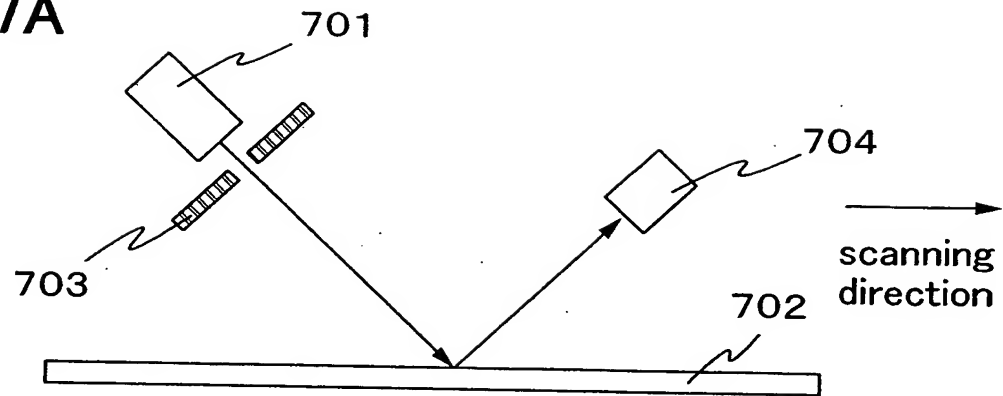


FIG.7B

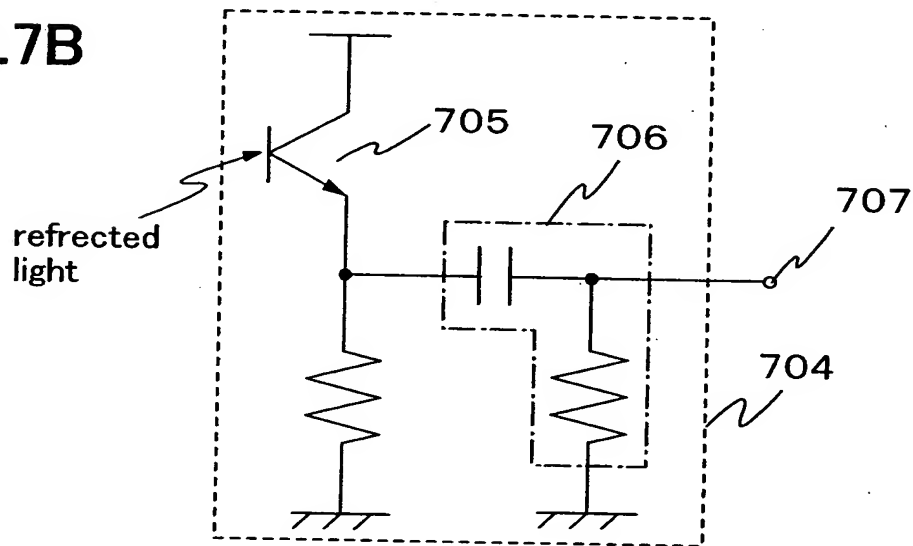


FIG.7C

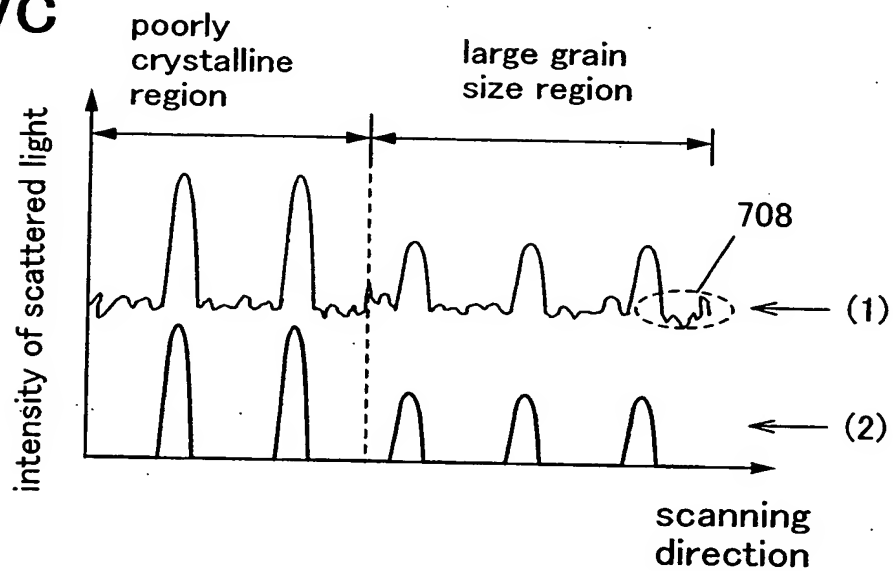


FIG. 8A

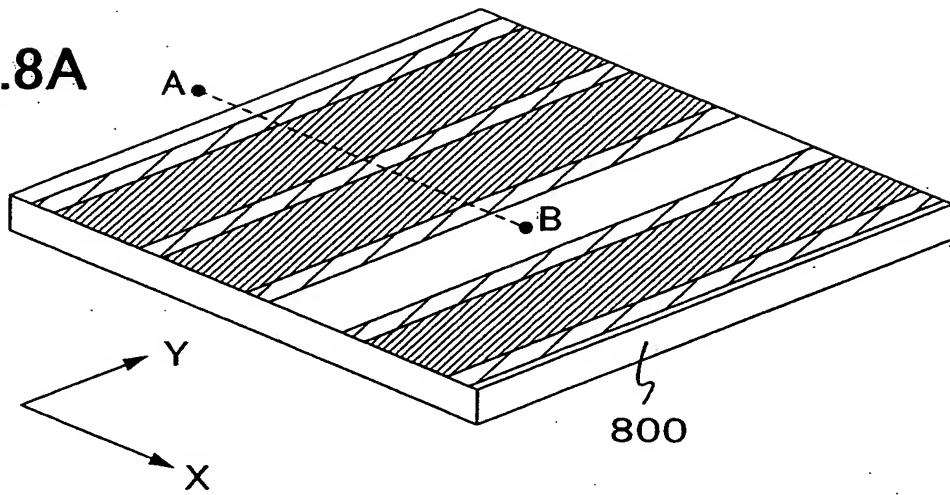


FIG. 8B

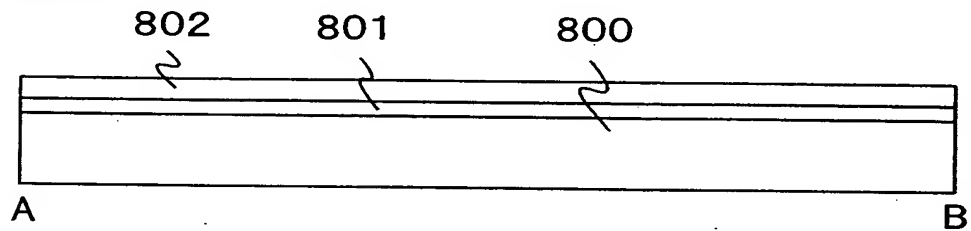


FIG. 8C

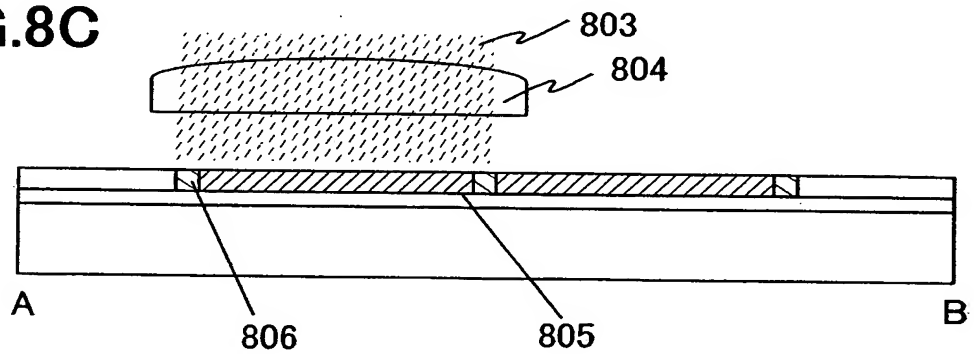


FIG. 8D

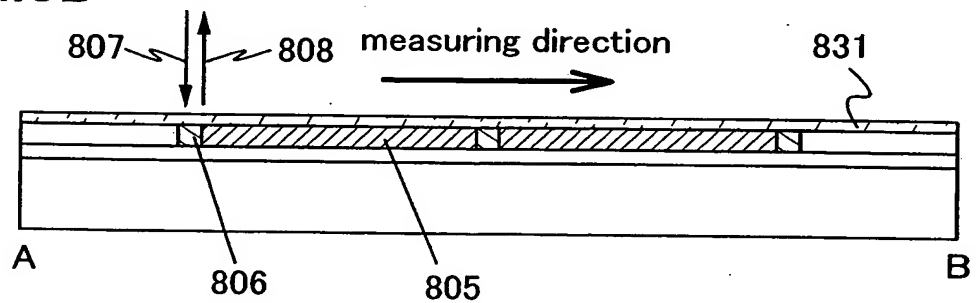


FIG.9A

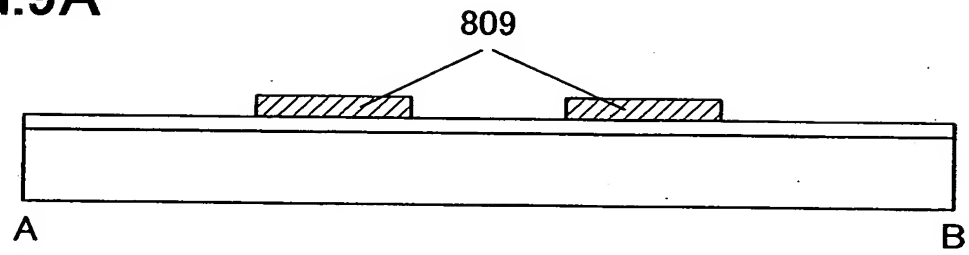


FIG.9B

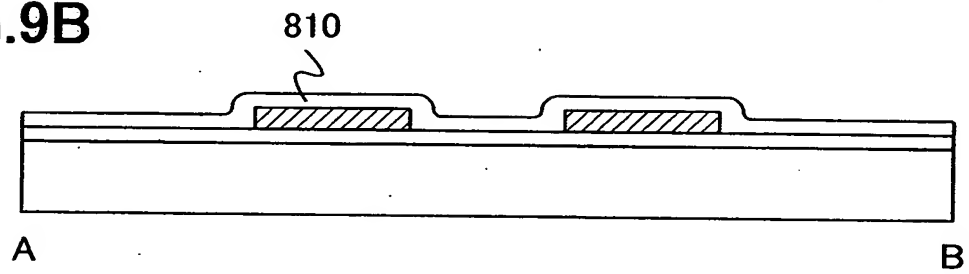


FIG.9C

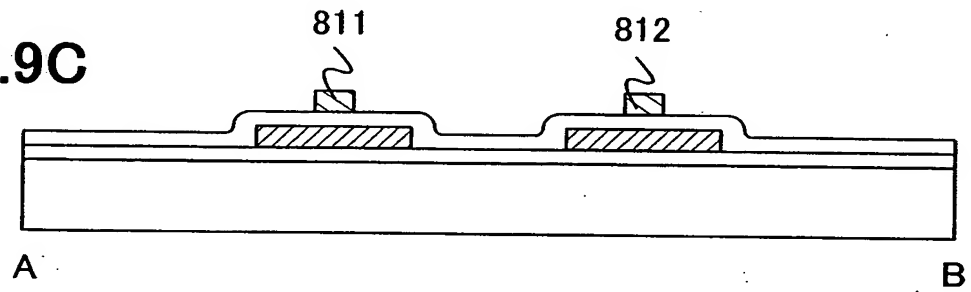


FIG.10A

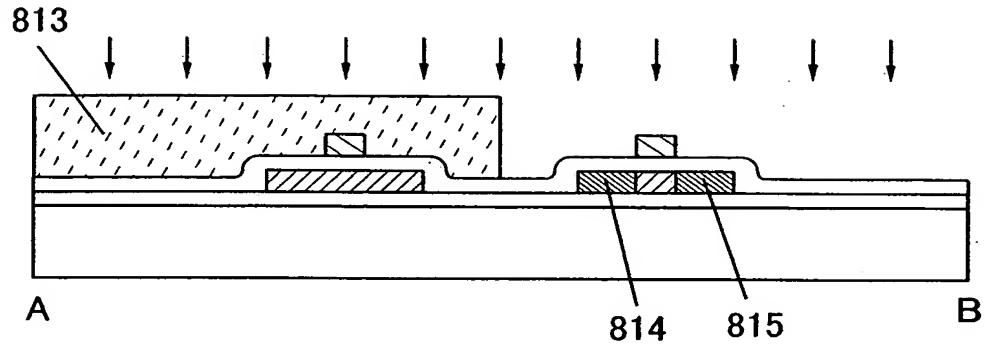


FIG.10B

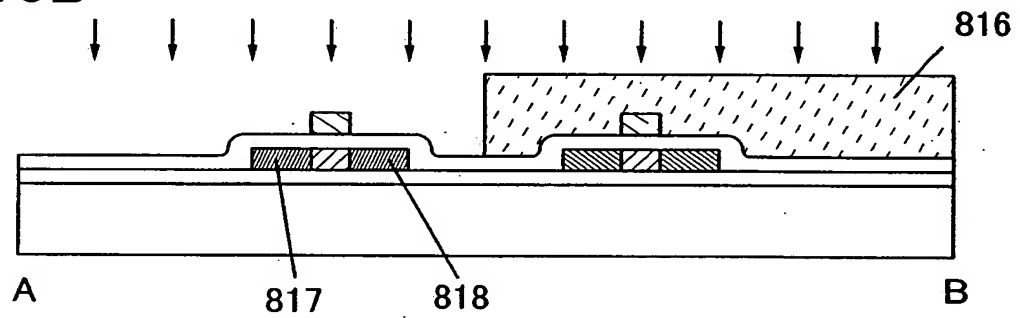


FIG.10C

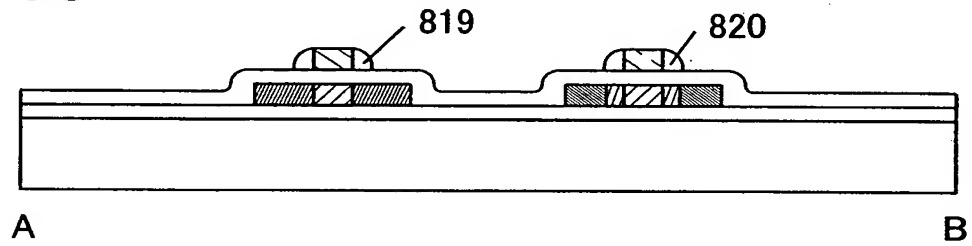


FIG.10D

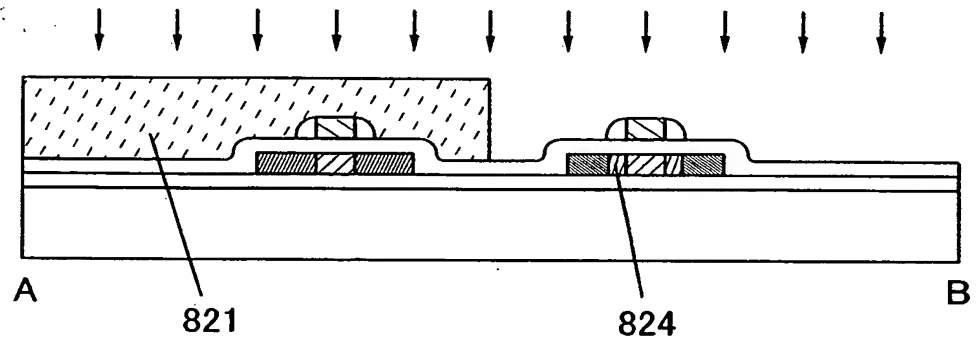


FIG.11A

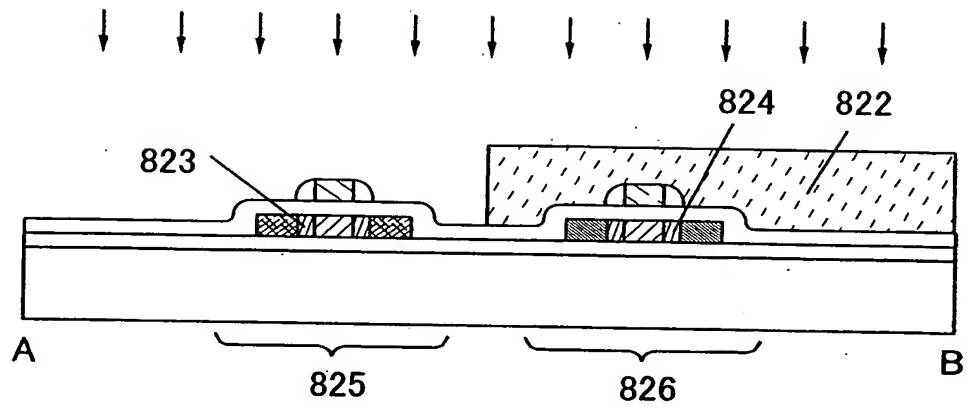


FIG.11B

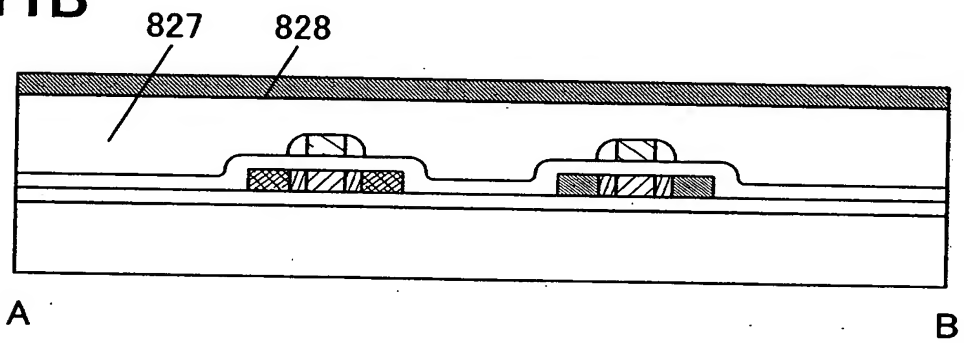


FIG.11C

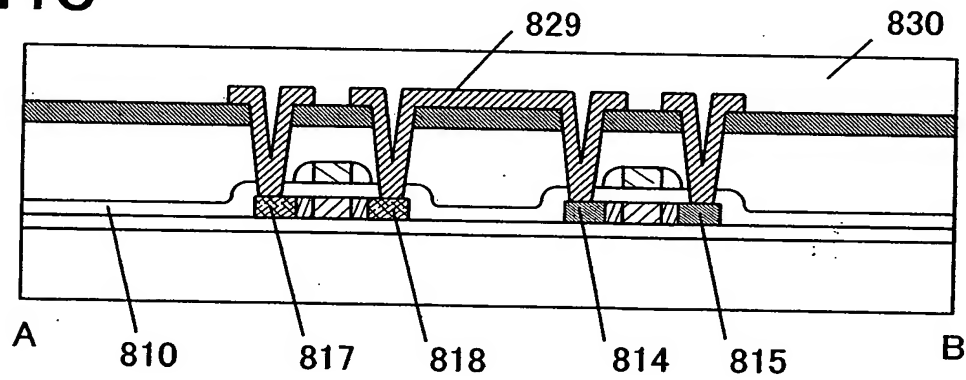


FIG.12

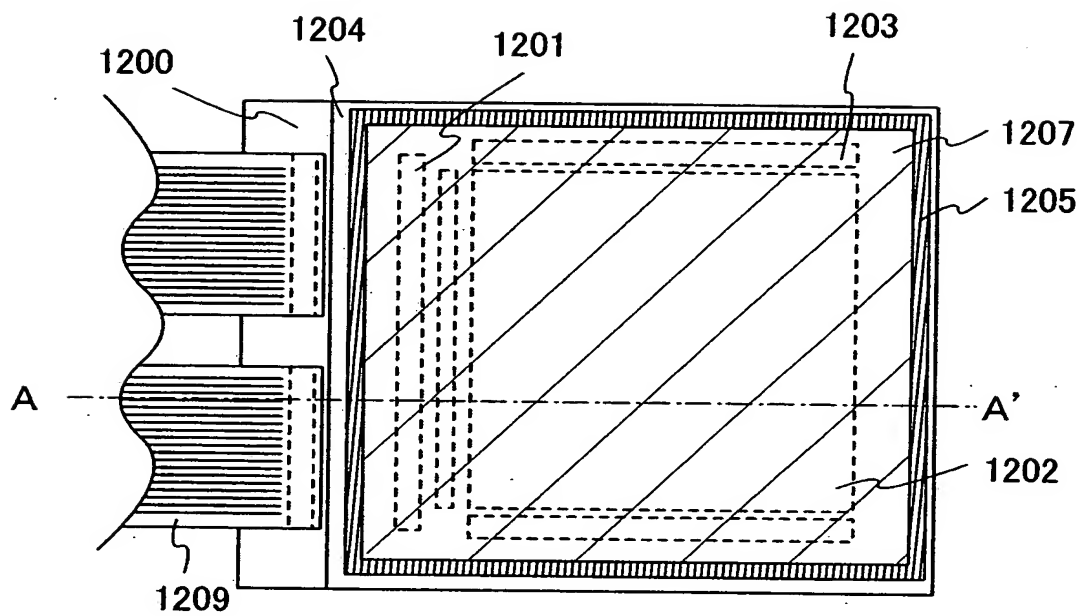


FIG. 13

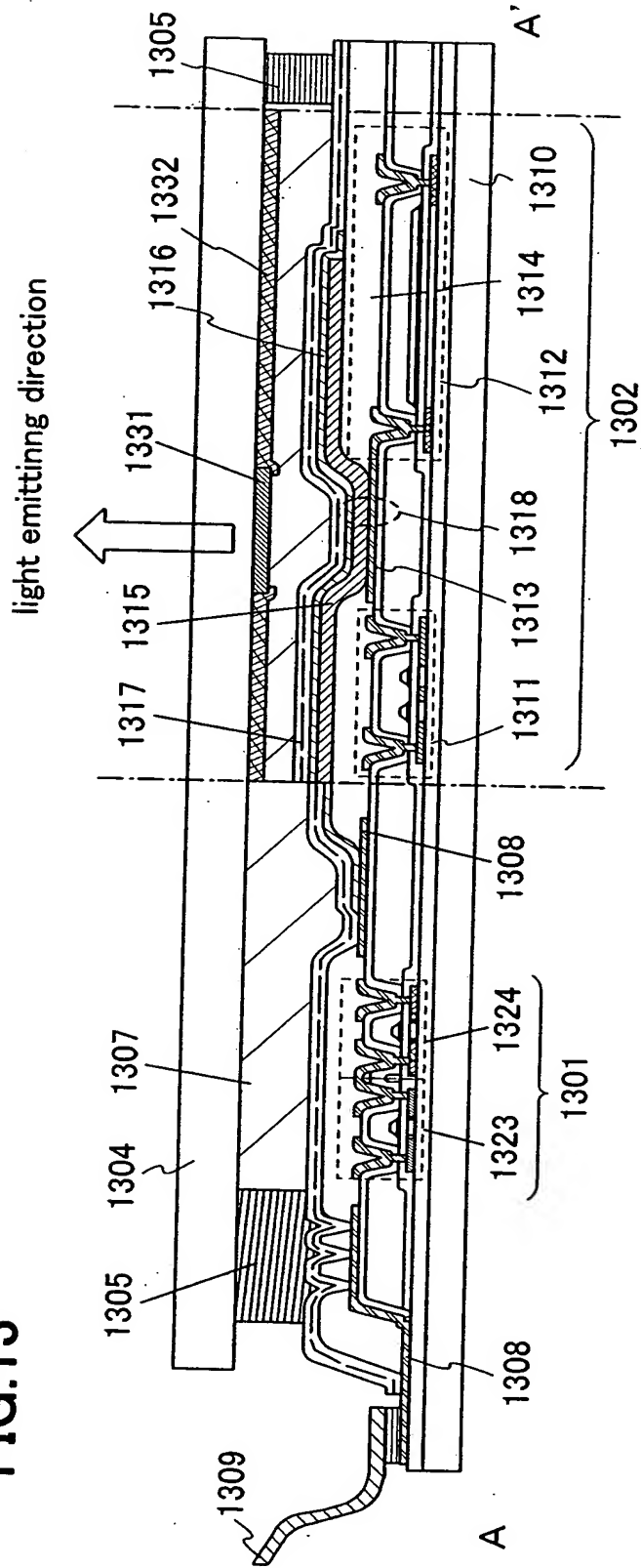


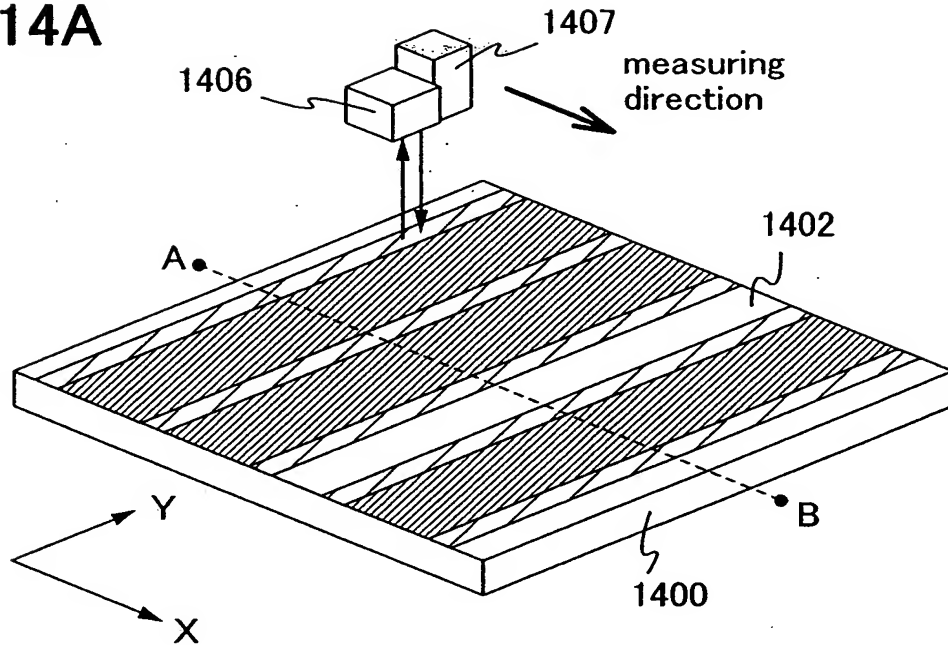
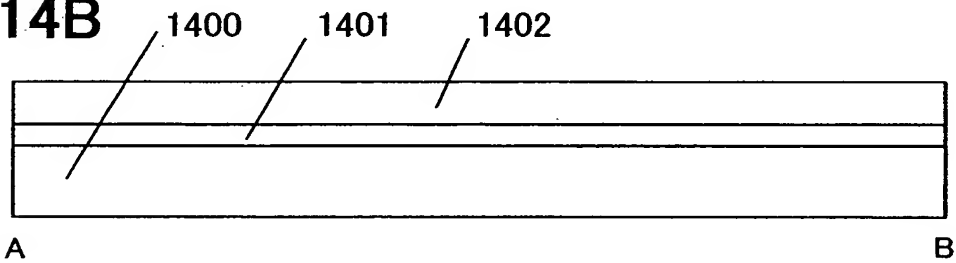
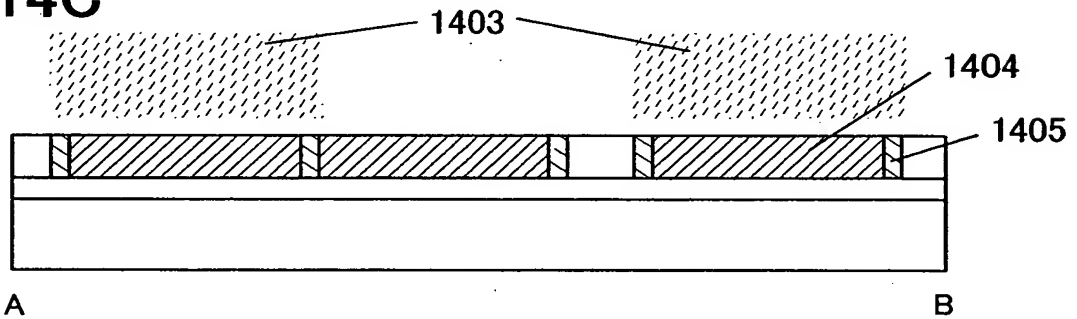
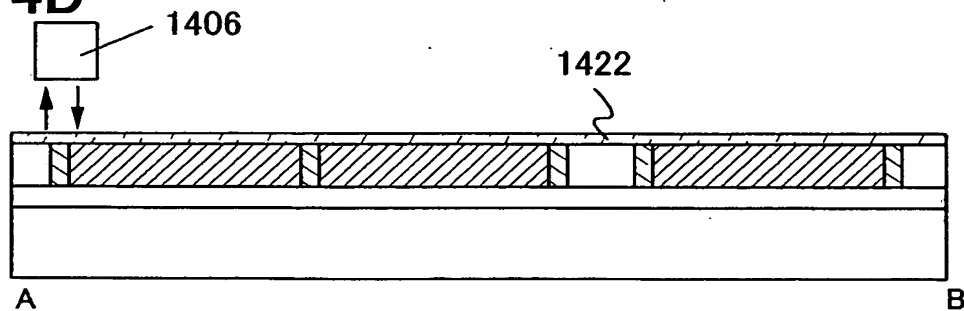
FIG.14A**FIG.14B****FIG.14C****FIG.14D**

FIG.15A

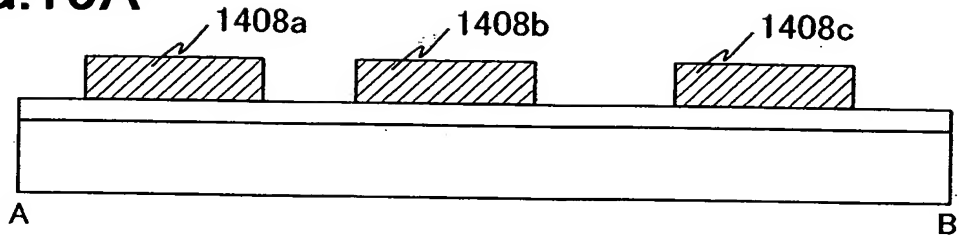


FIG.15B

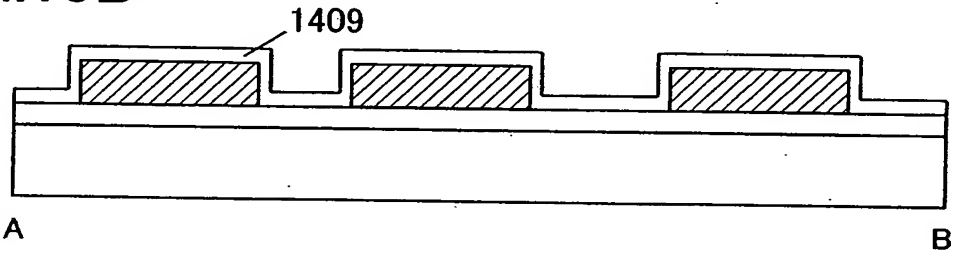


FIG.15C

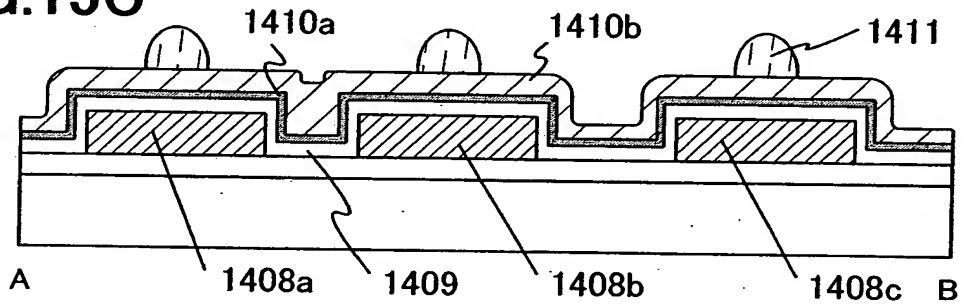


FIG.15D

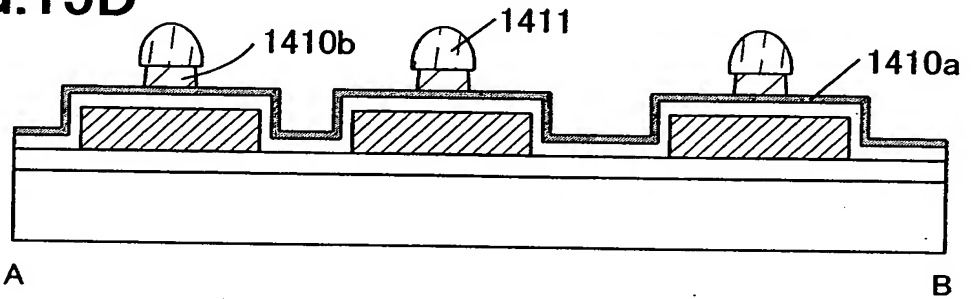


FIG.15E

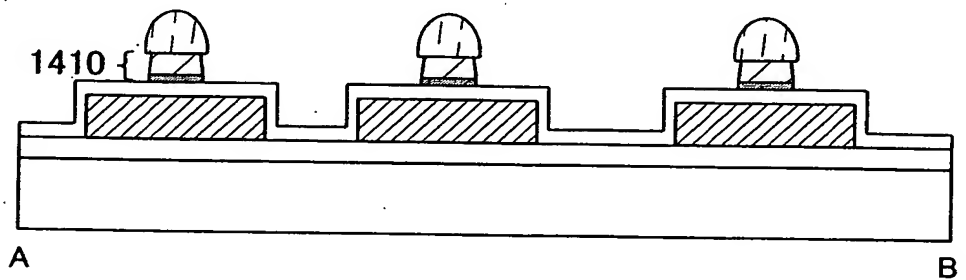


FIG.16A

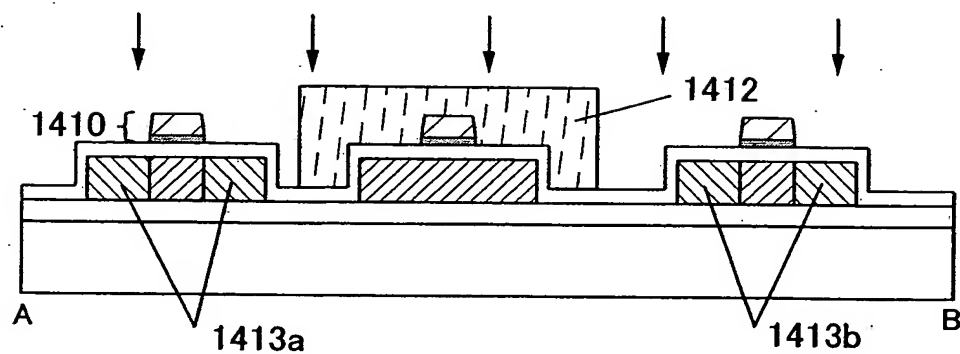


FIG.16B

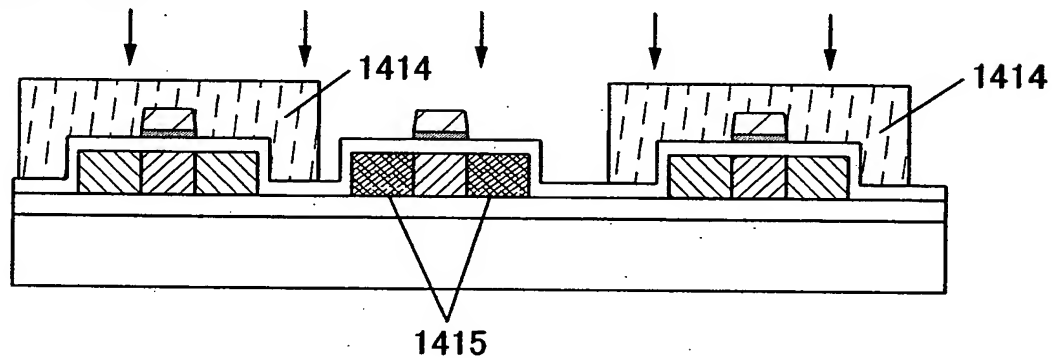


FIG.16C

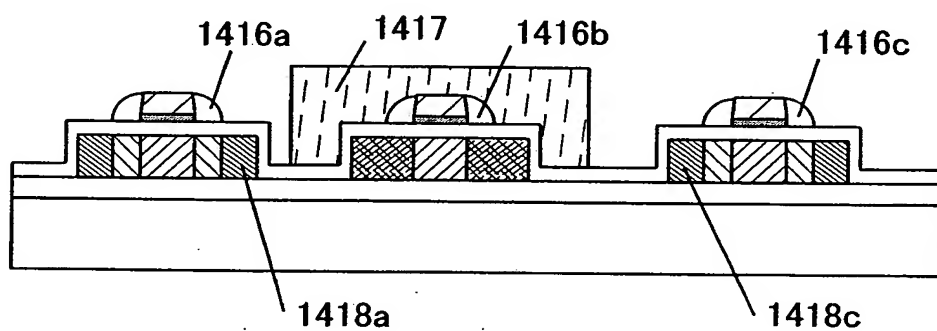


FIG.17A

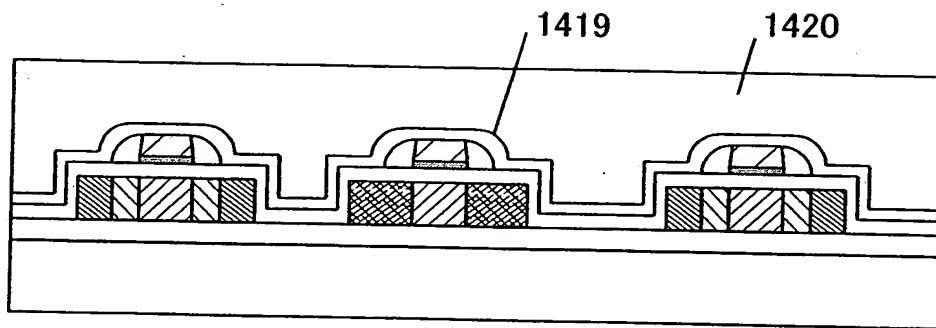
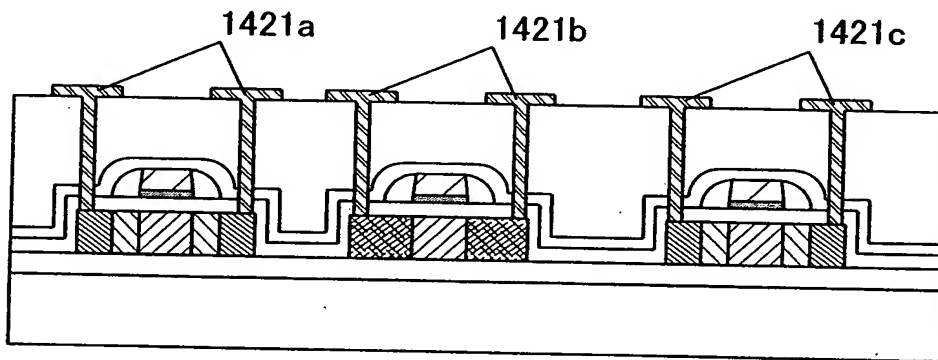
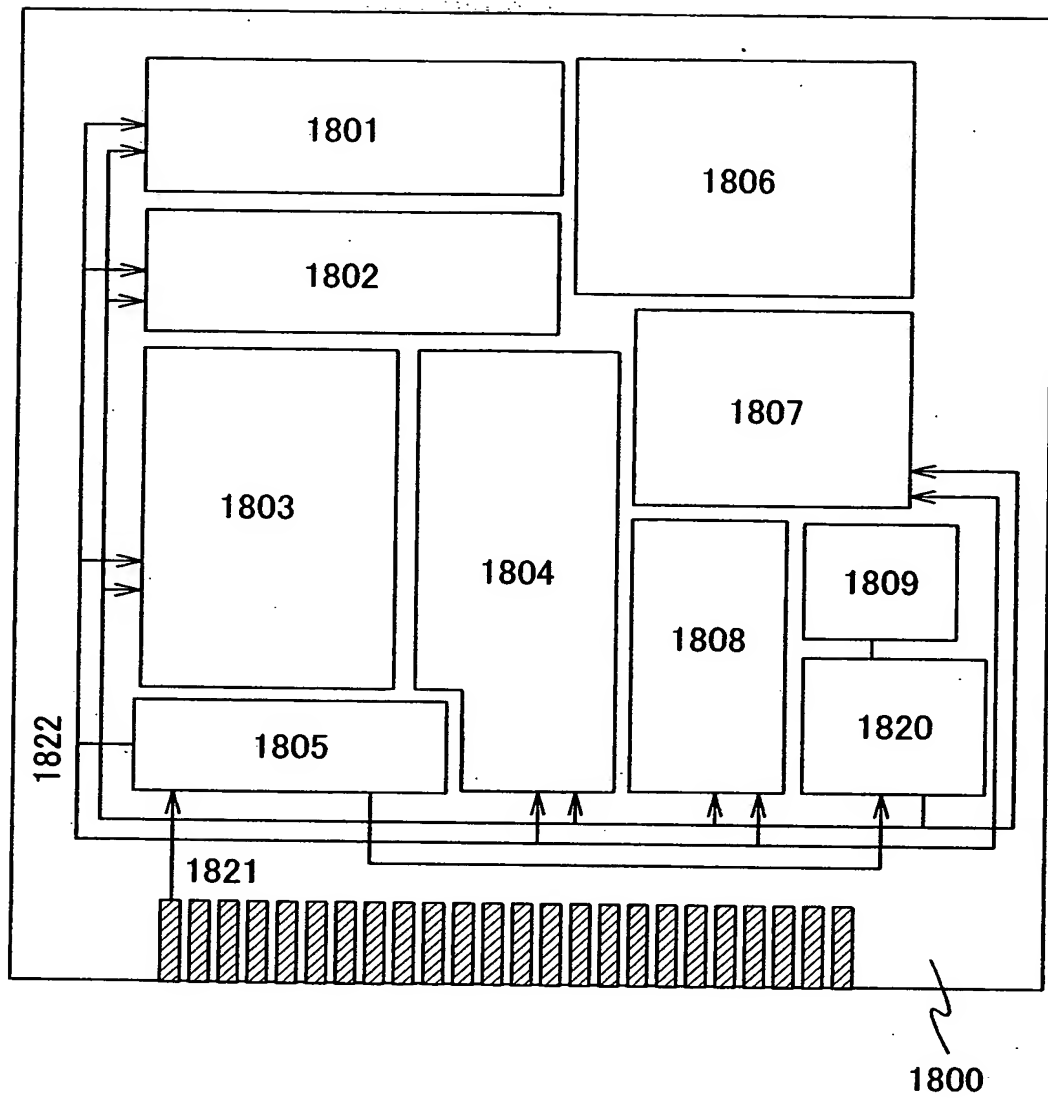


FIG.17B



**FIG.18**

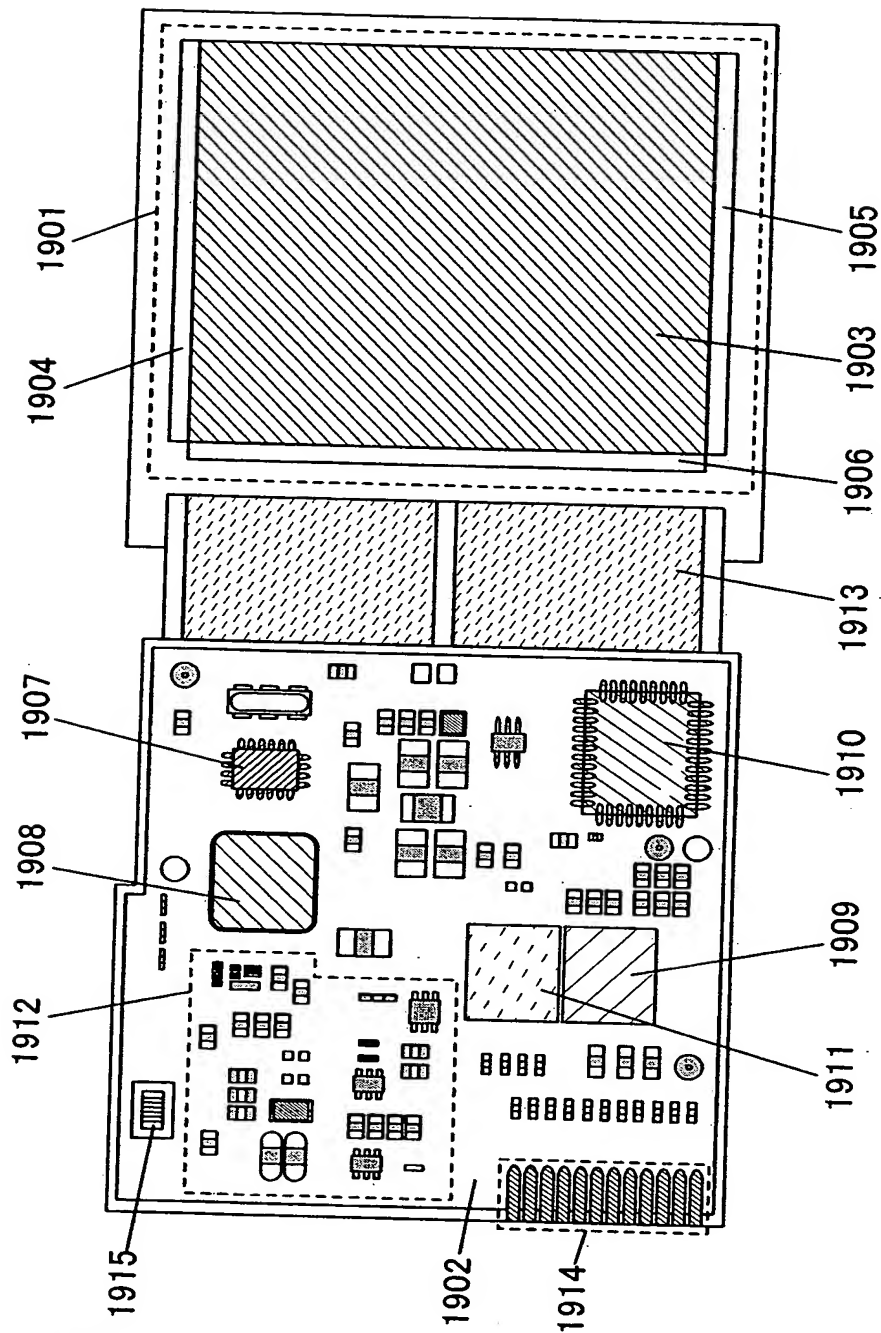


FIG.19

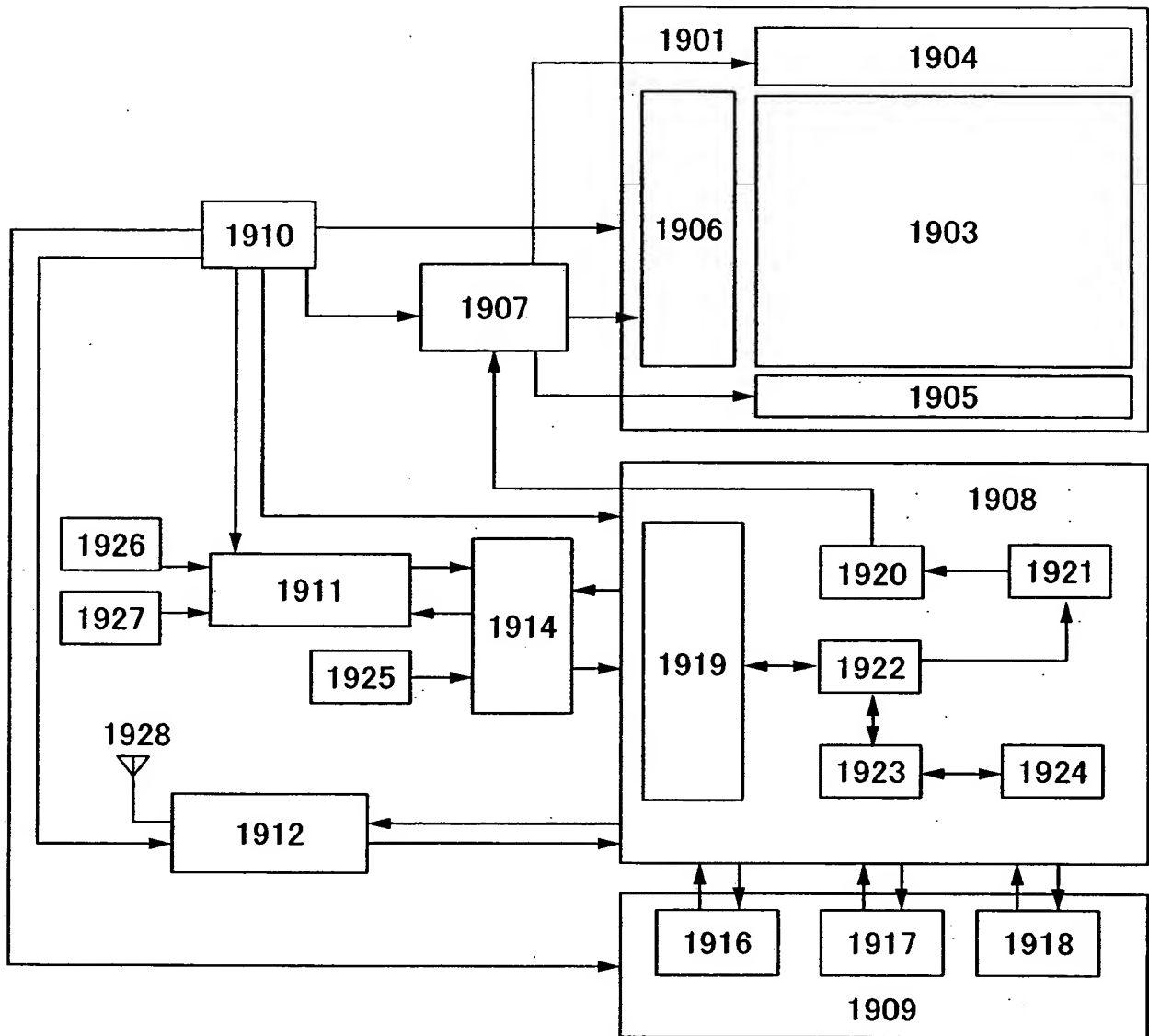


FIG.20

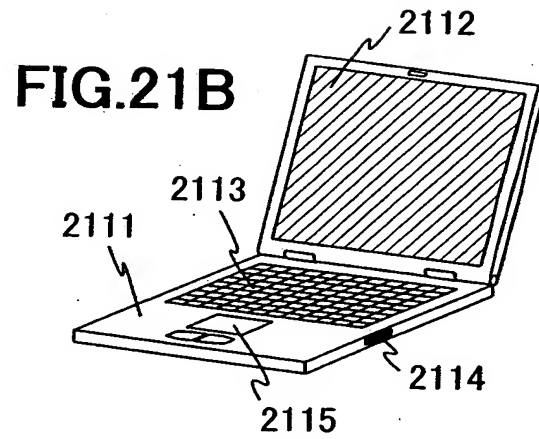
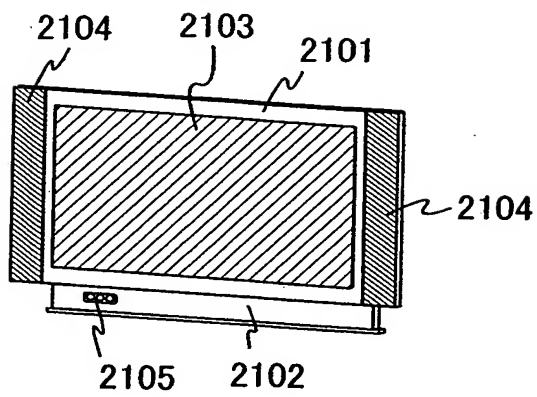
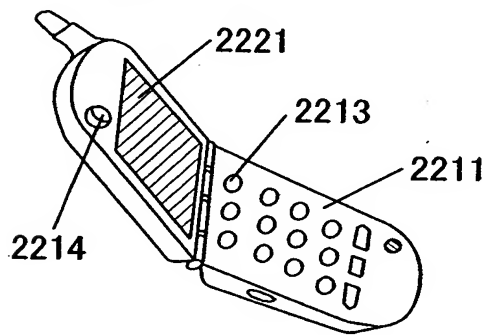
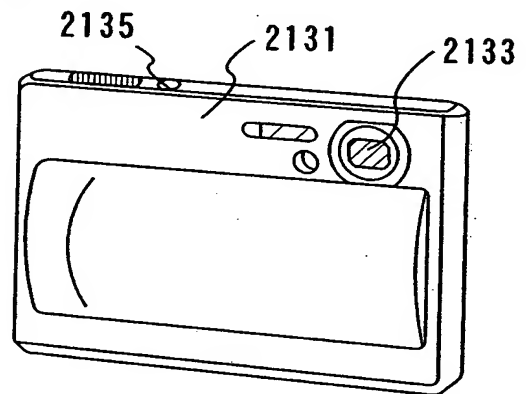
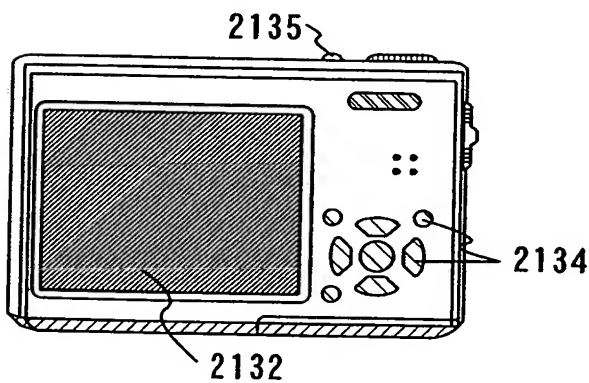
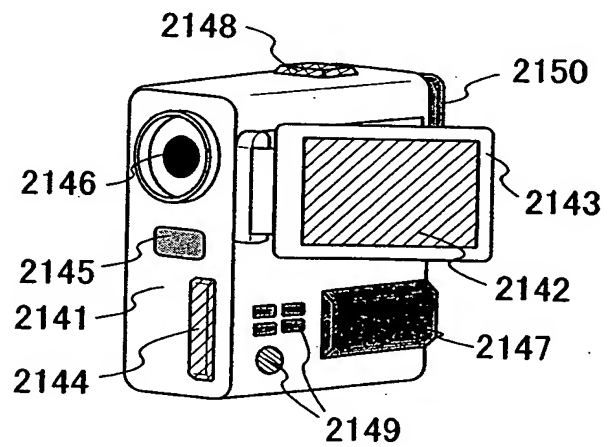
FIG.21A**FIG.21C****FIG.21D****FIG.21E****FIG.21F**

FIG.22A

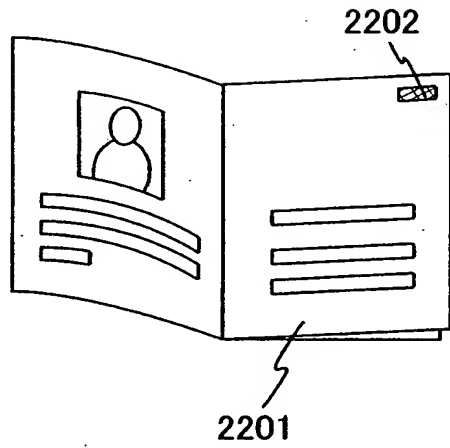
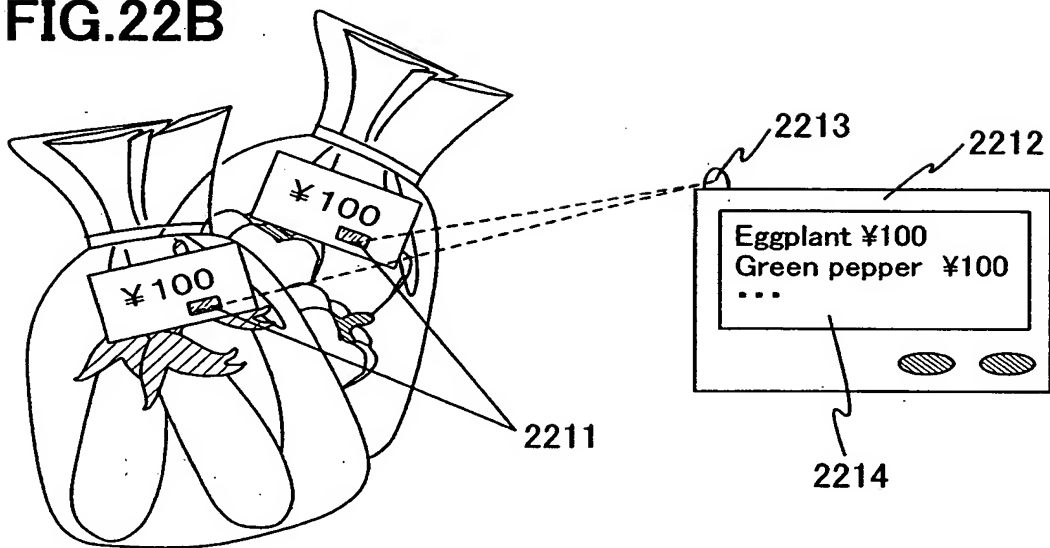
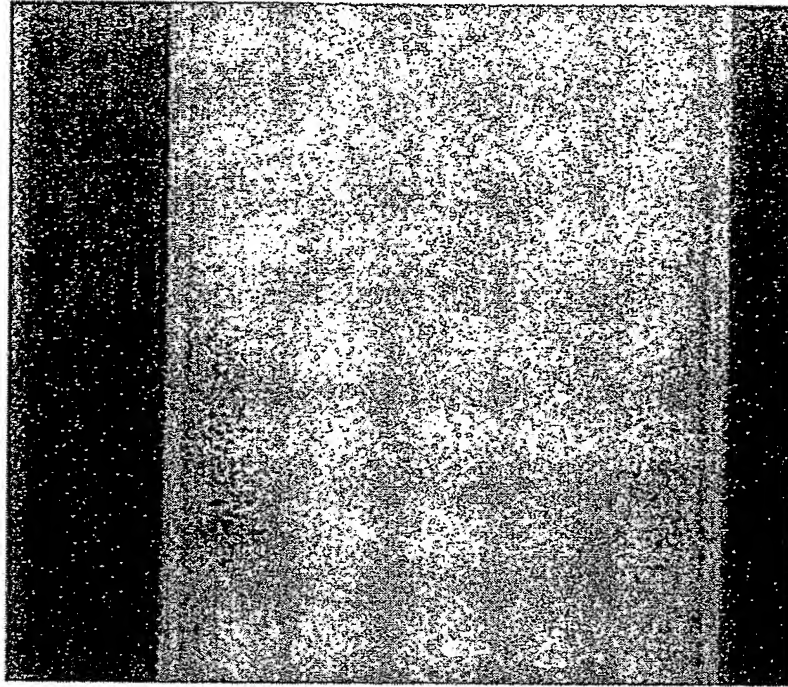


FIG.22B

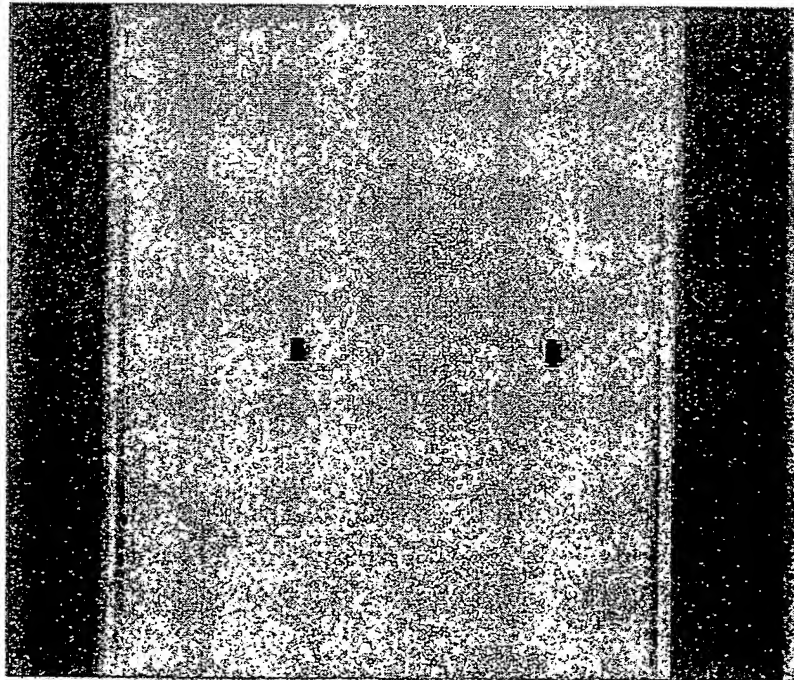


**FIG.
23A**



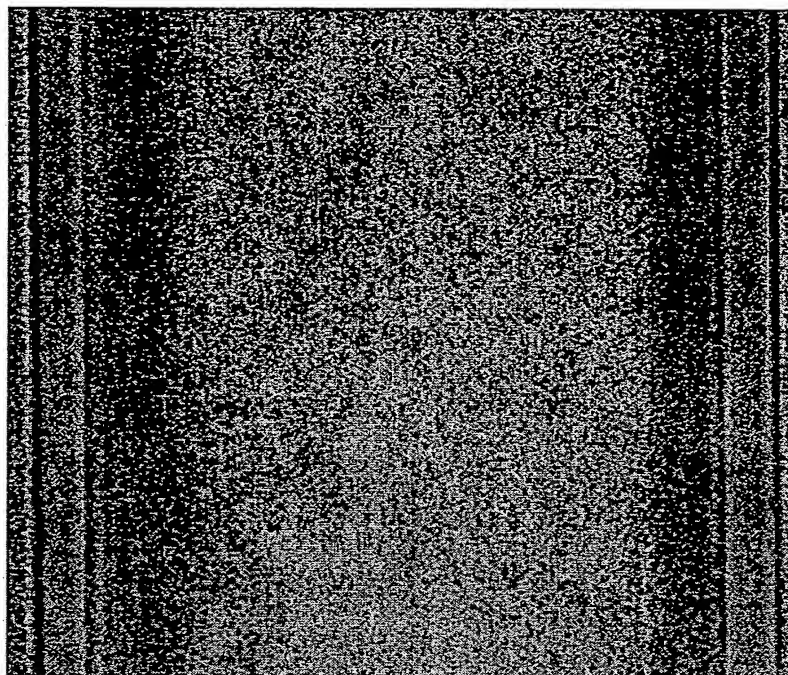
poorly crystalline region in opposite ends

**FIG.
23B**



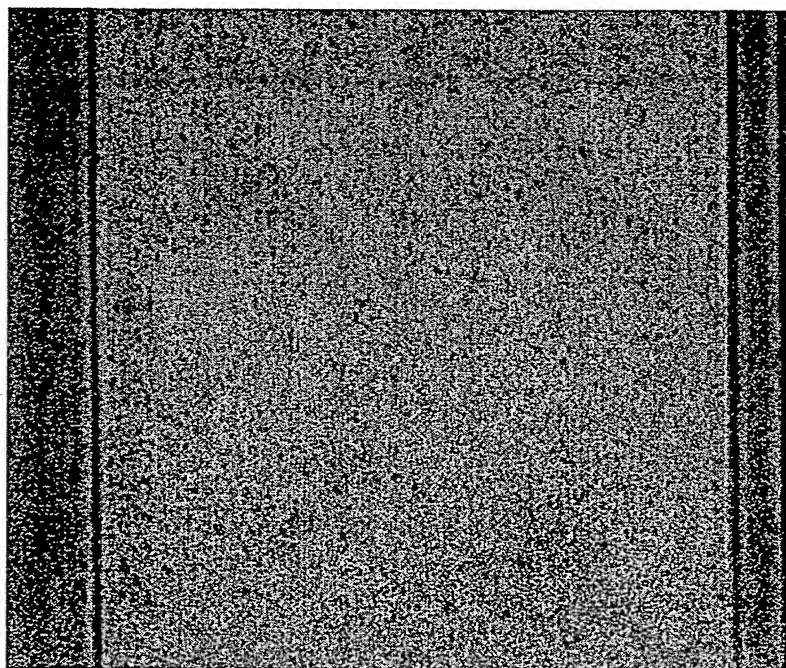
wholly large grain size crystal

**FIG.
24A**



poorly crystalline region in opposite ends

**FIG.
24B**



wholly large grain size crystal

FIG.25A

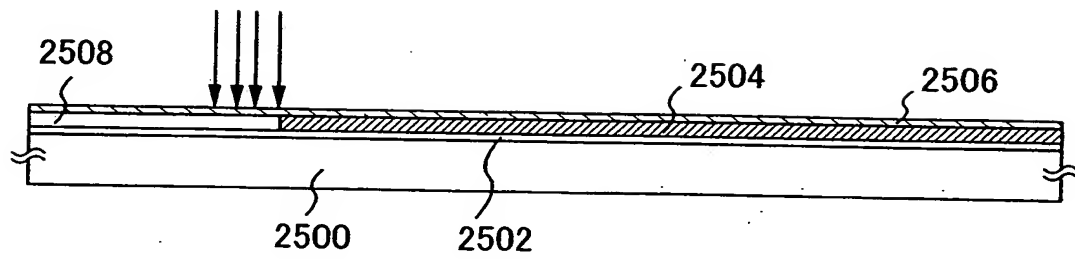


FIG.25B

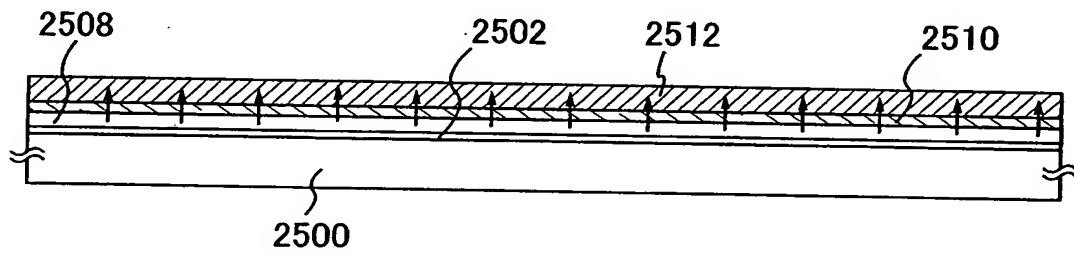


FIG.25C

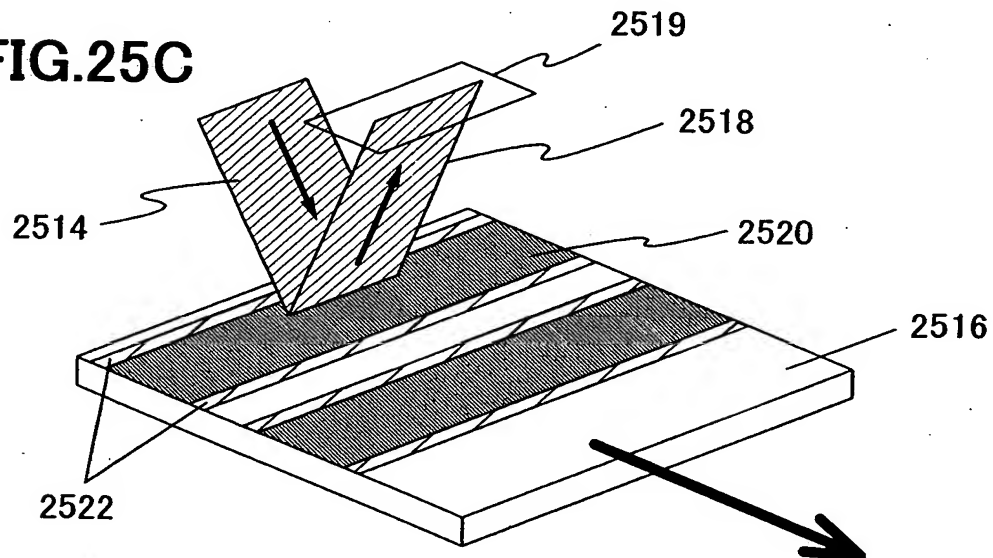


FIG.26A

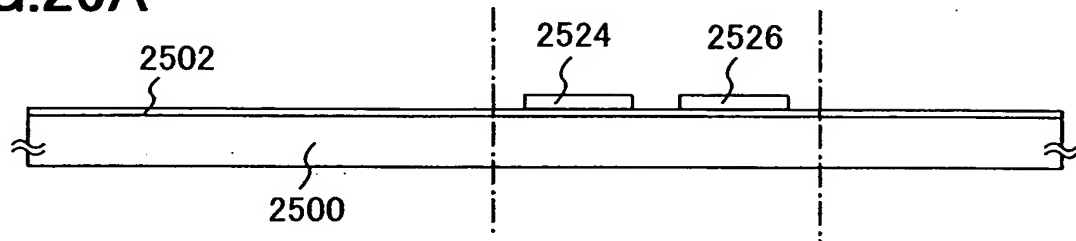


FIG.26B

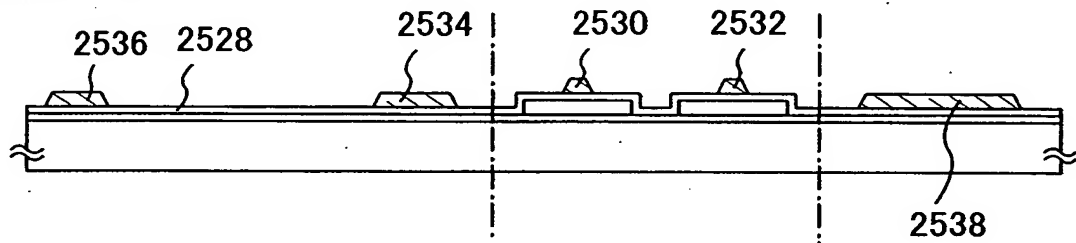


FIG.26C

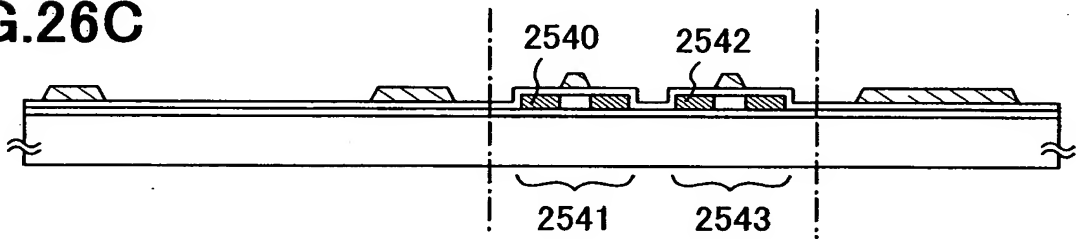


FIG.26D

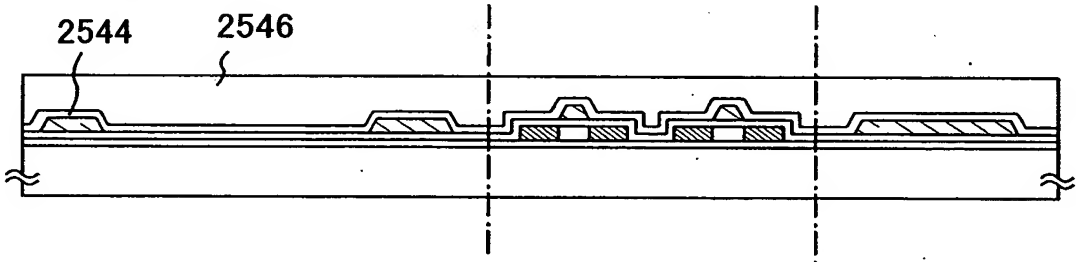


FIG.27A

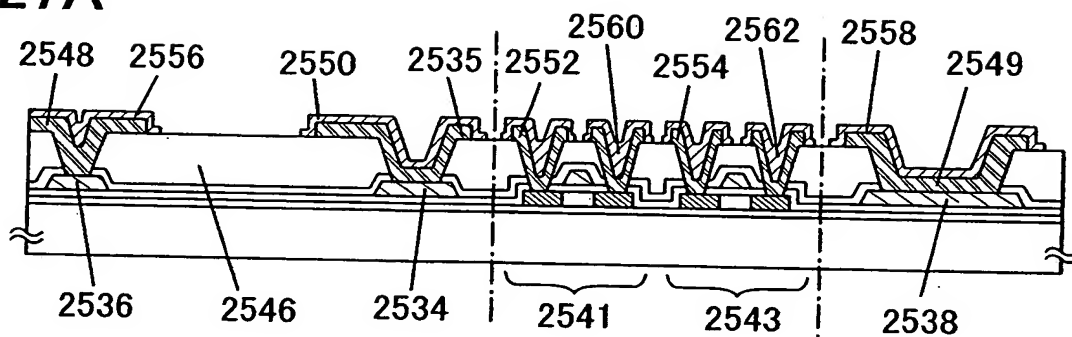


FIG.27B

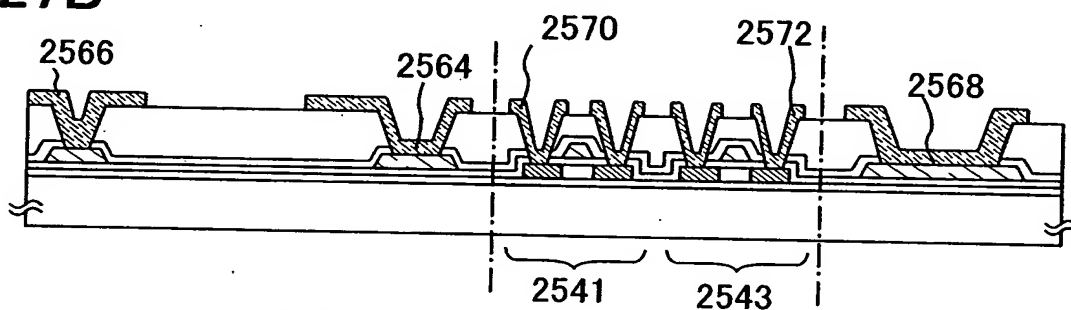


FIG.27C

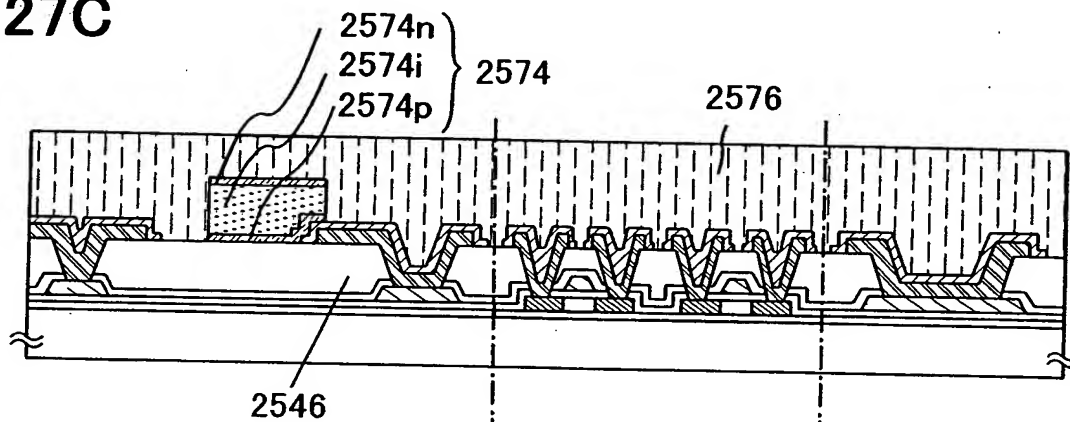


FIG.27D

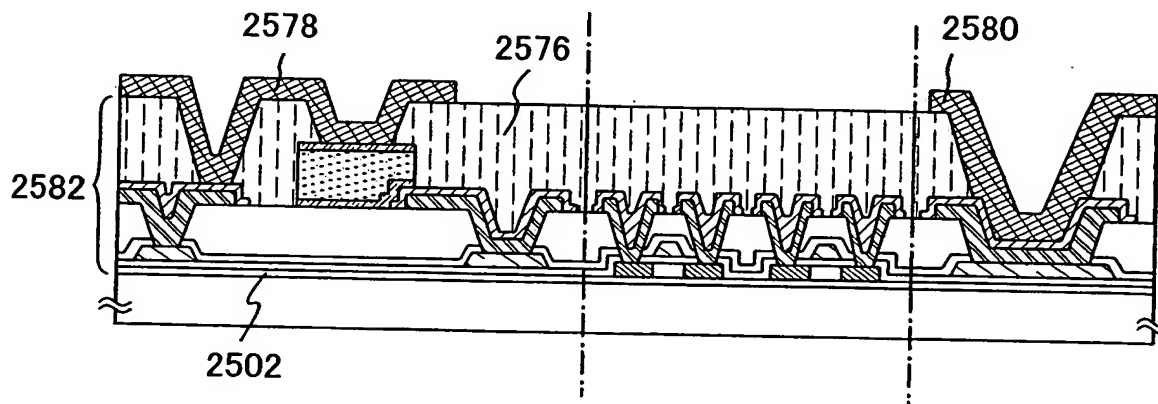


FIG.28A

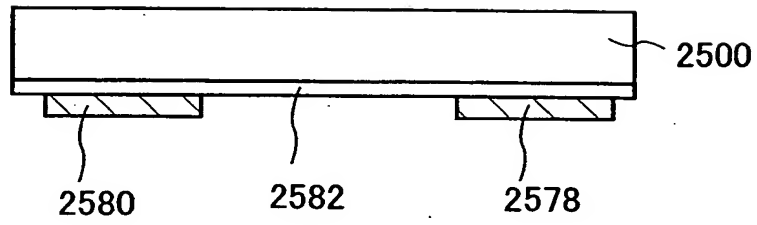


FIG.28B

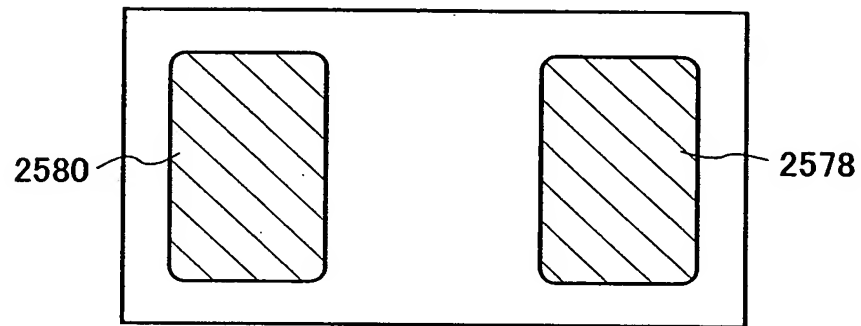
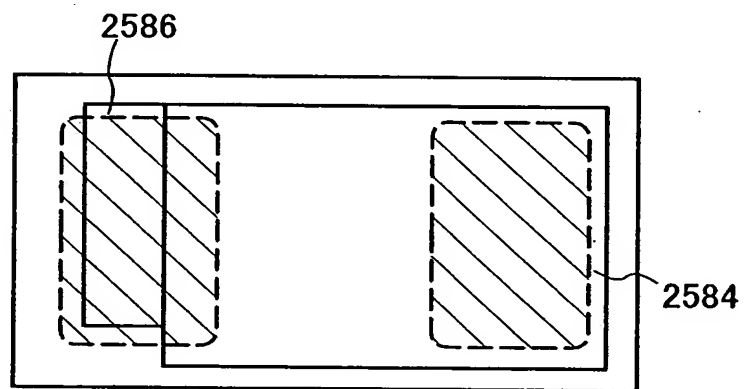


FIG.28C



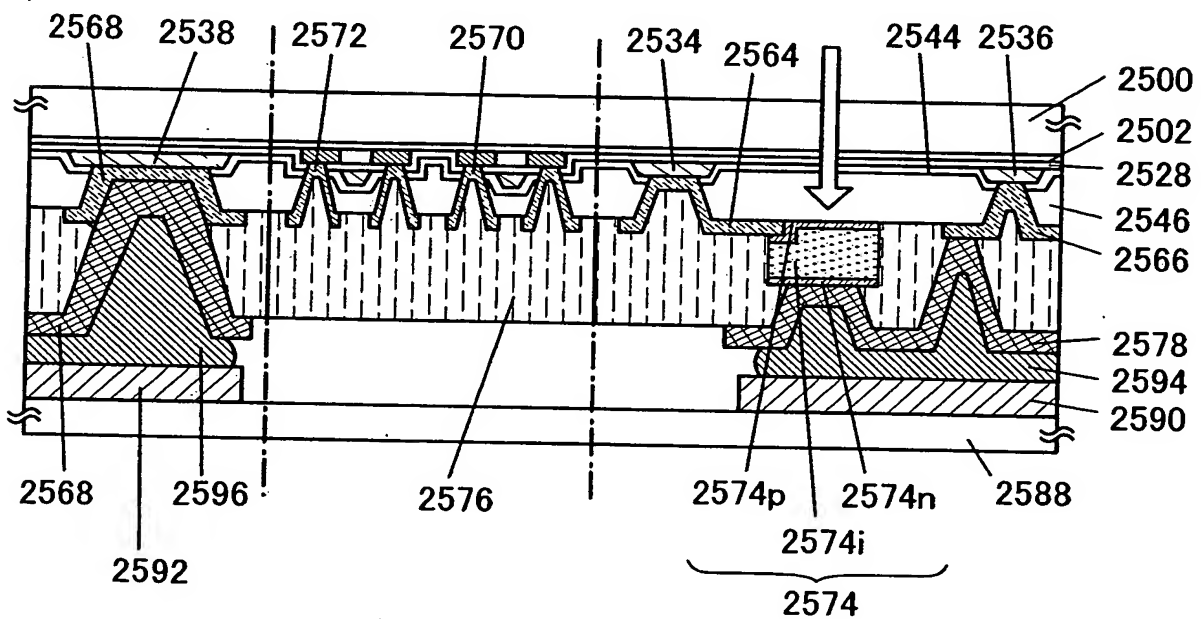
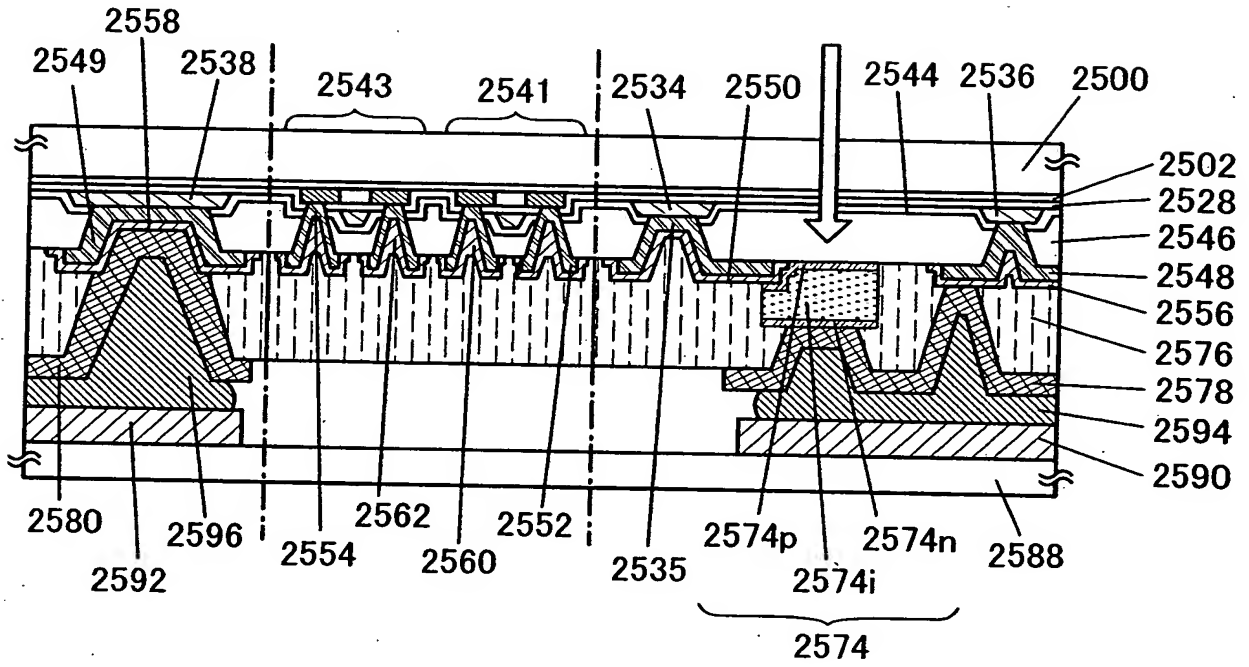


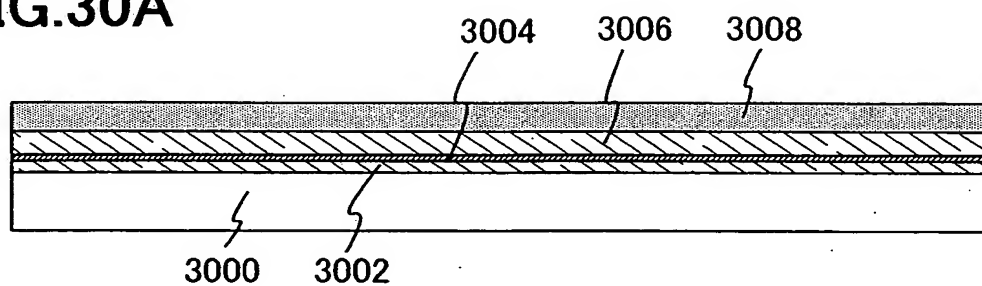
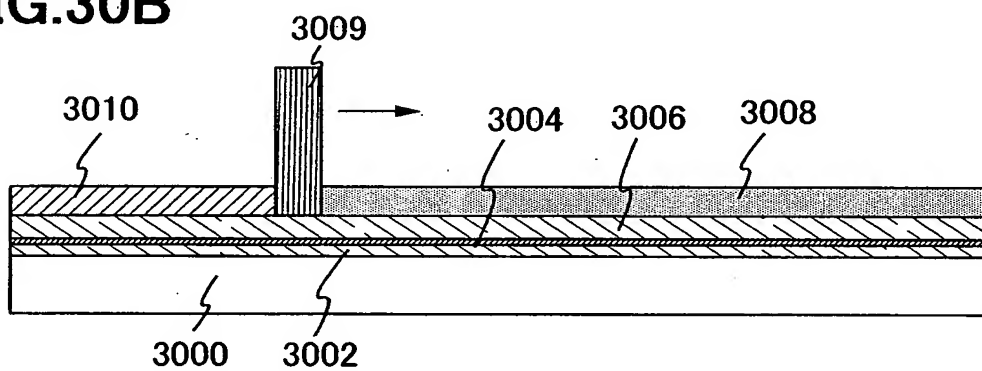
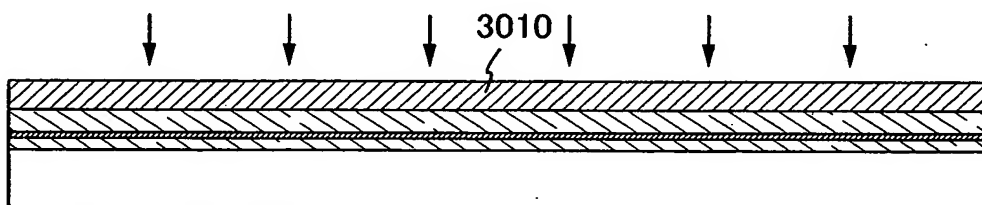
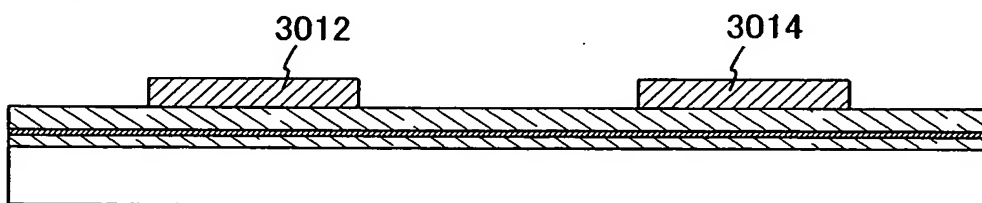
FIG.30A**FIG.30B****FIG.30C****FIG.30D**

FIG.31A

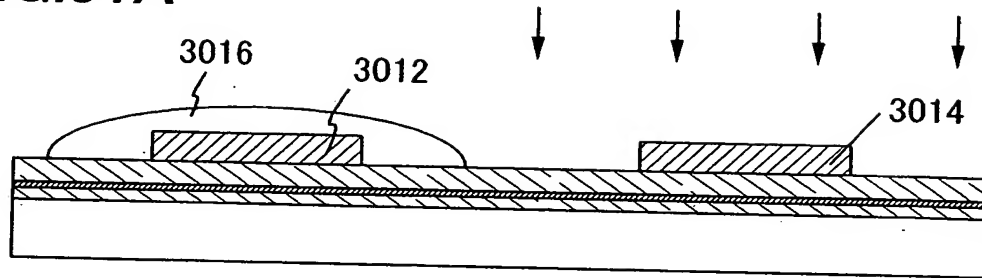


FIG.31B

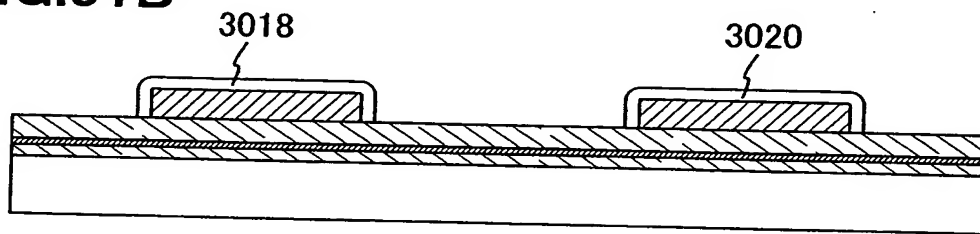


FIG.31C

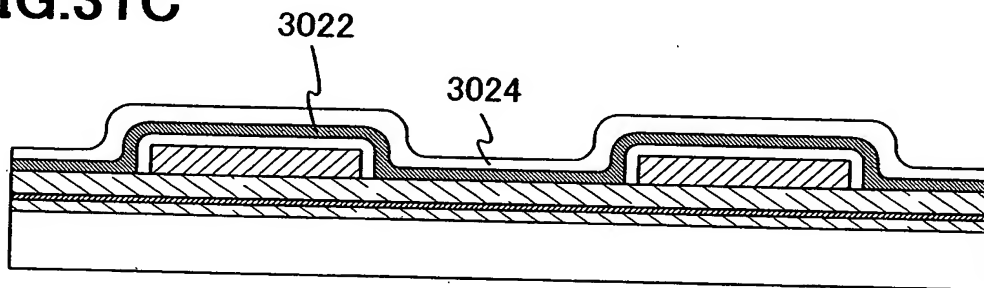


FIG.31D

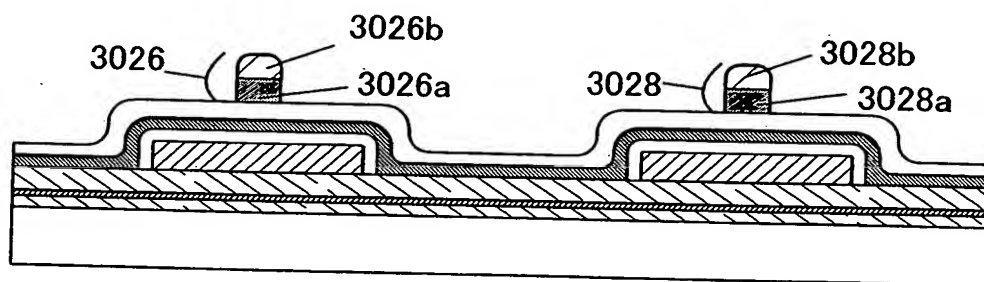


FIG.32A

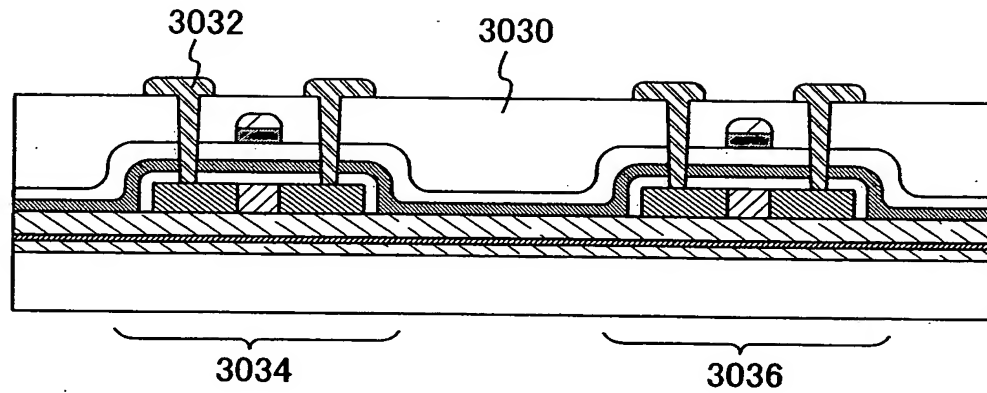


FIG.32B

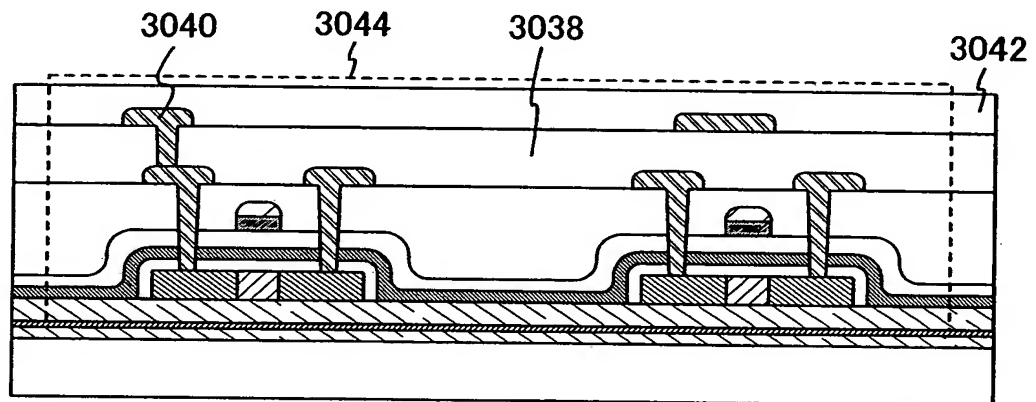


FIG.33A

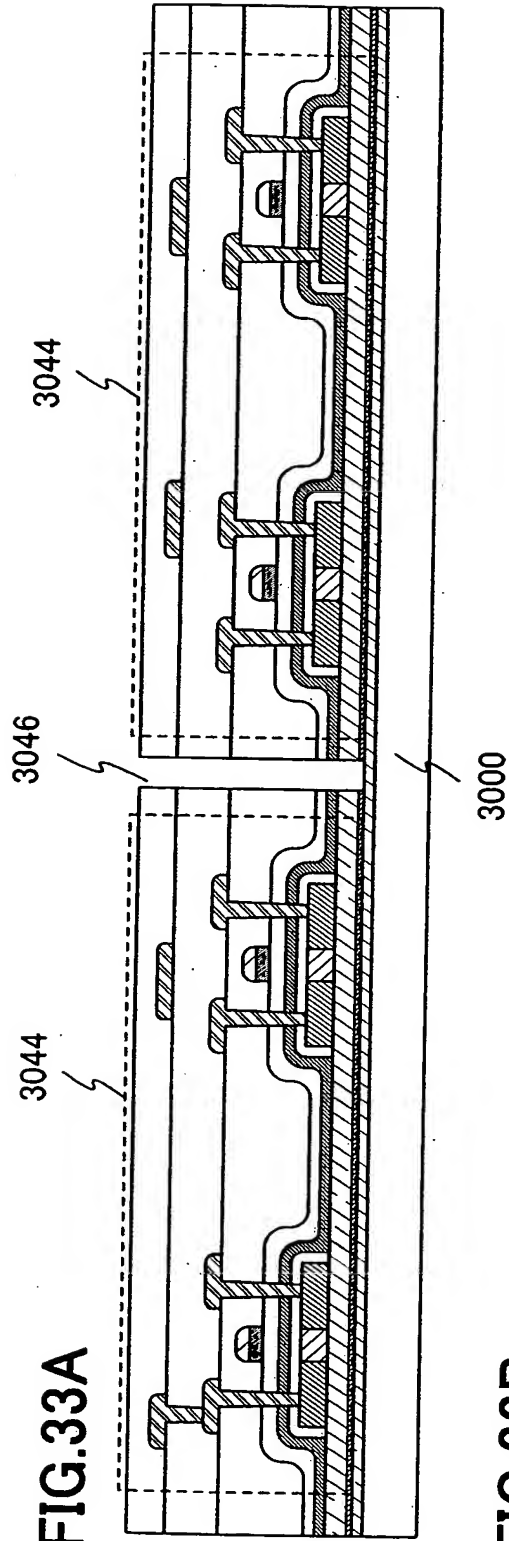


FIG.33B

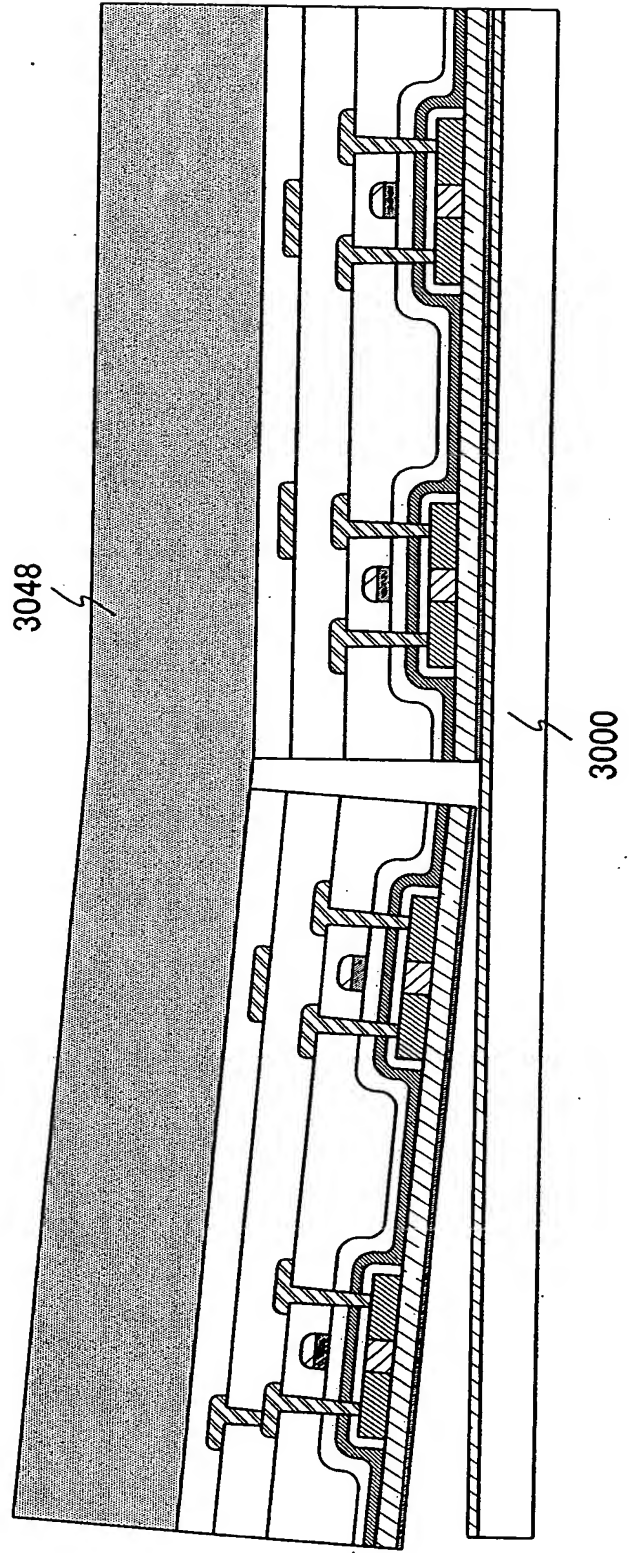


FIG.34A

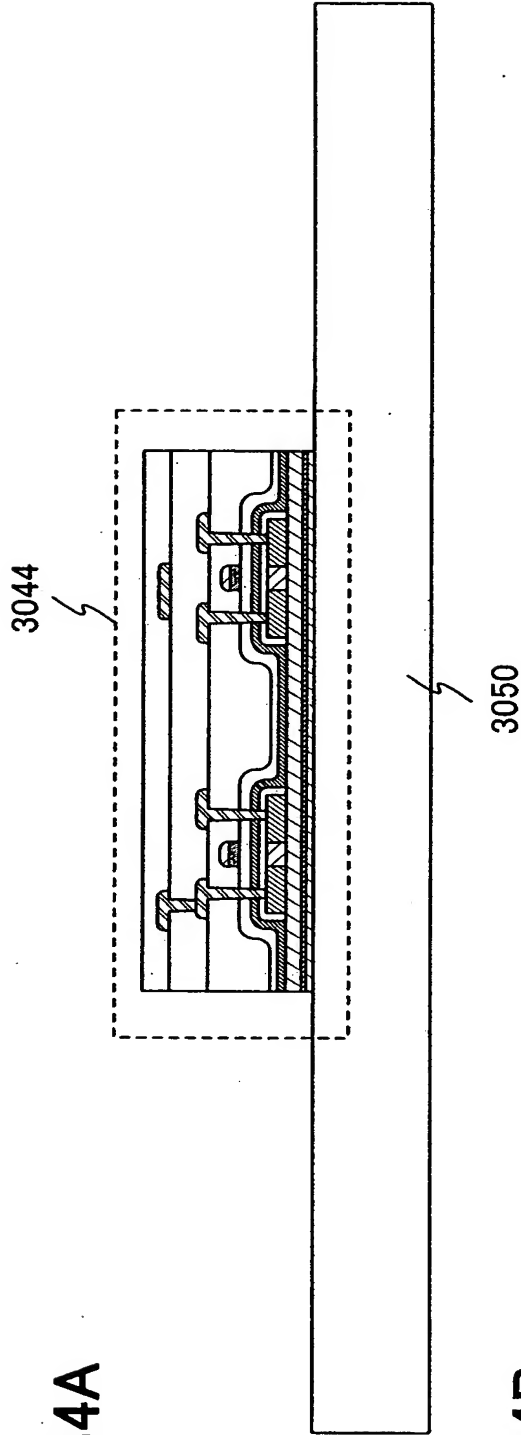


FIG.34B

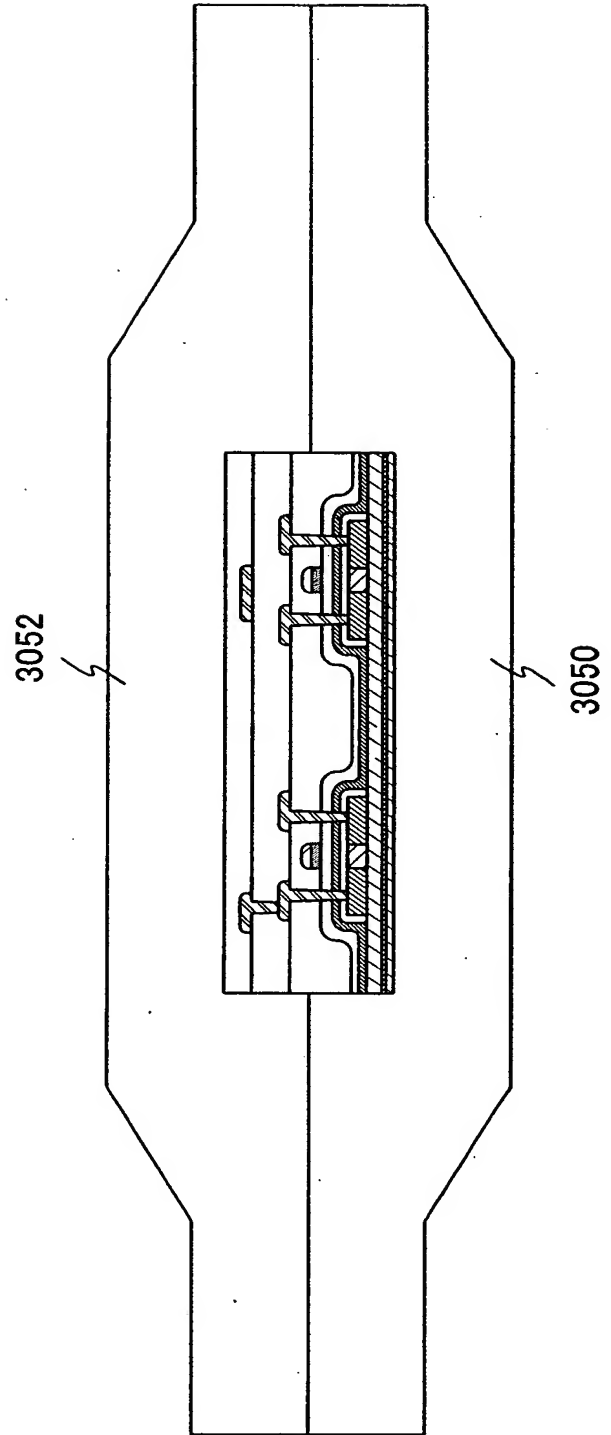


FIG.35A

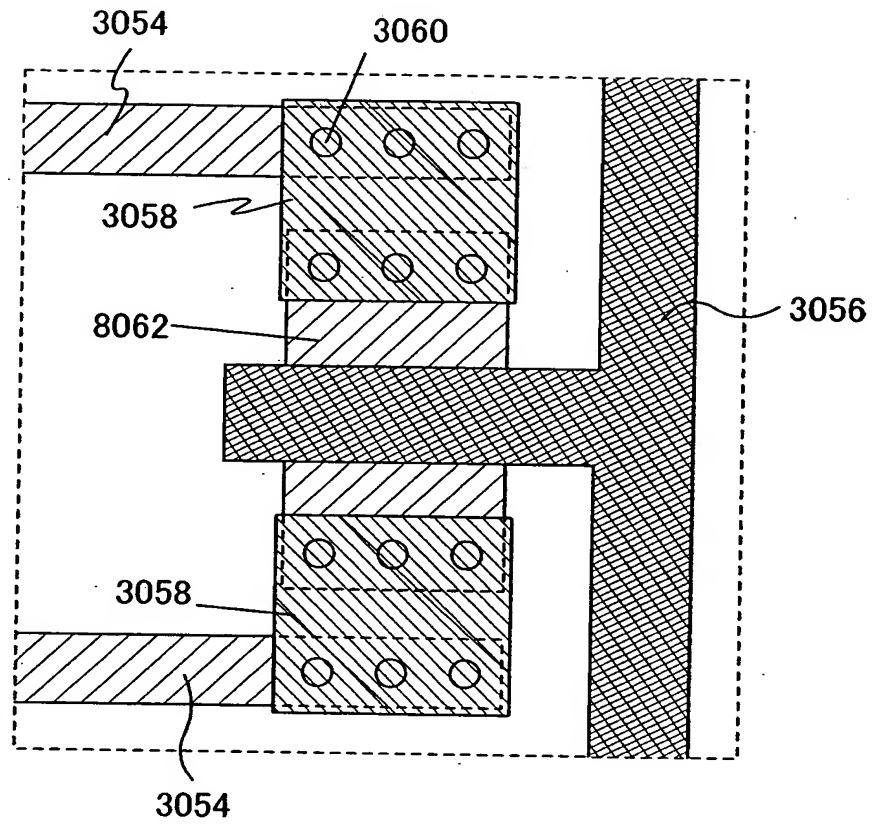
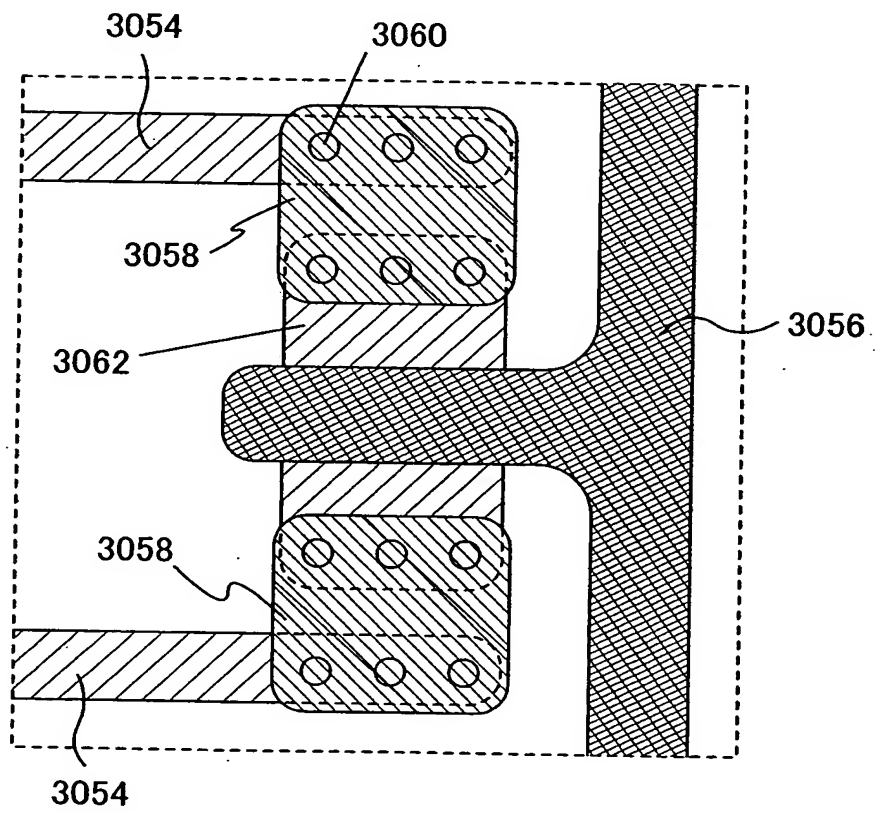


FIG.35B



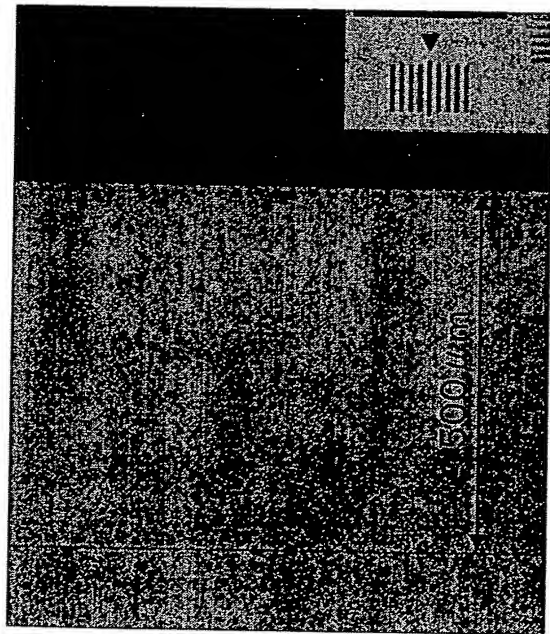


FIG. 36A original pixel

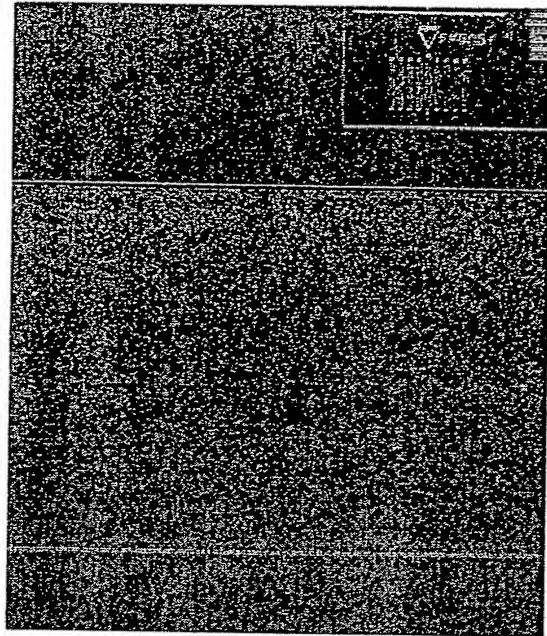


FIG. 36C sobel longitudinal direction processing

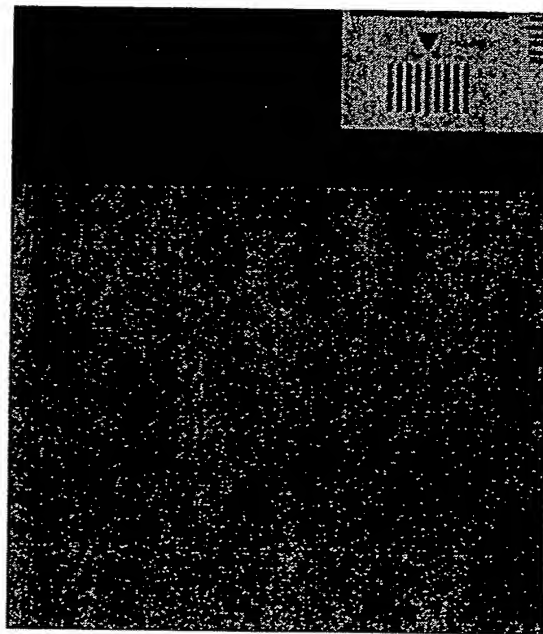


FIG. 36B gray-scale

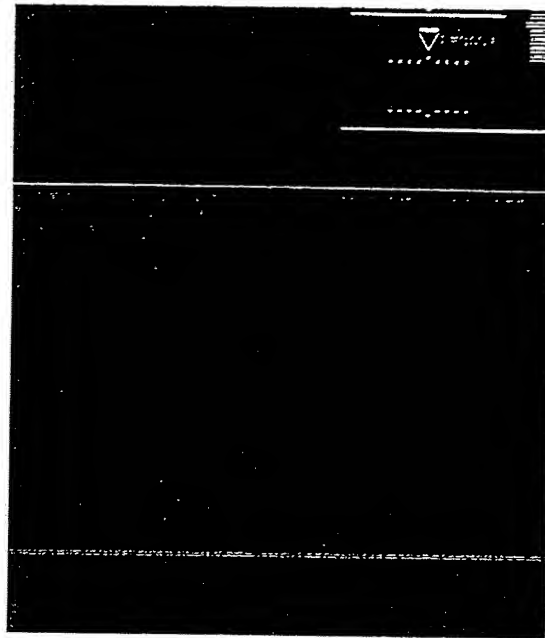


FIG. 36D averaging + median +
sobel longitudinal direction processing +binarizing

FIG.37A

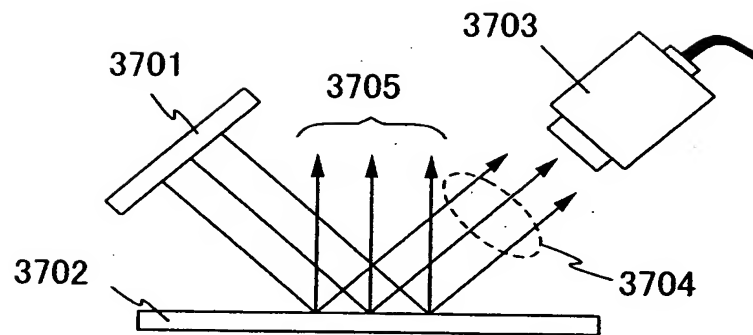


FIG.37B

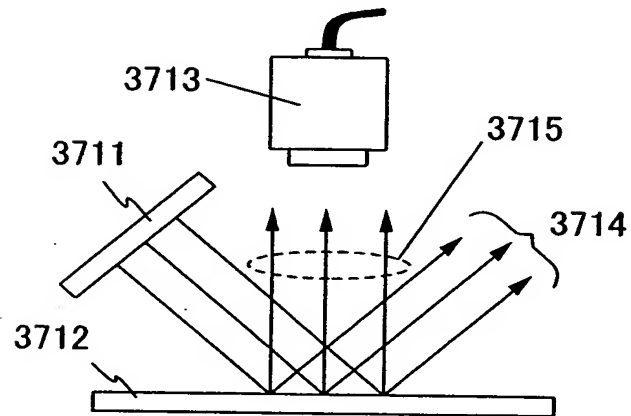


FIG.38A

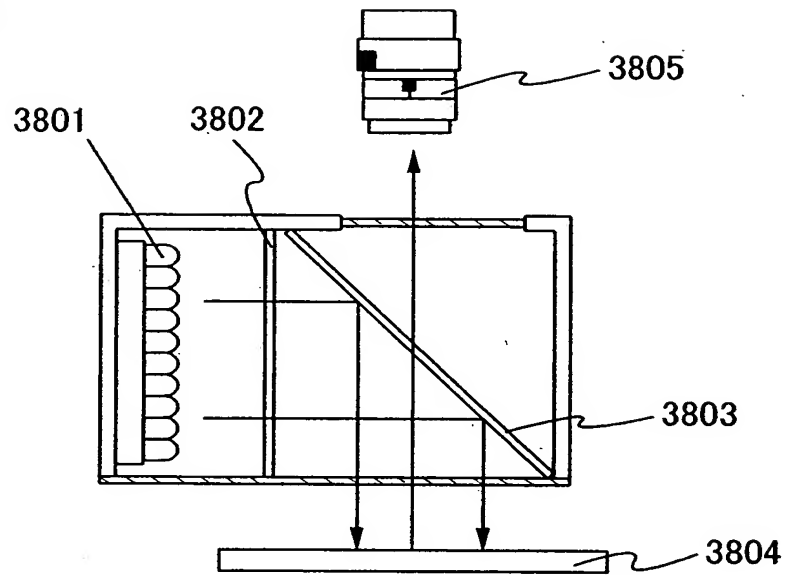


FIG.38B

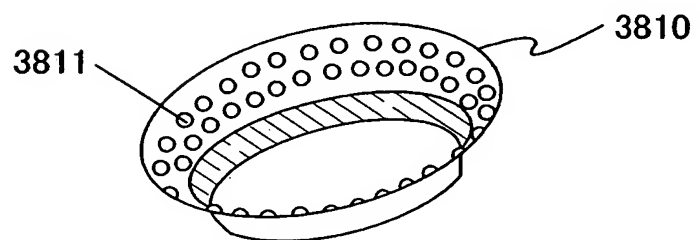
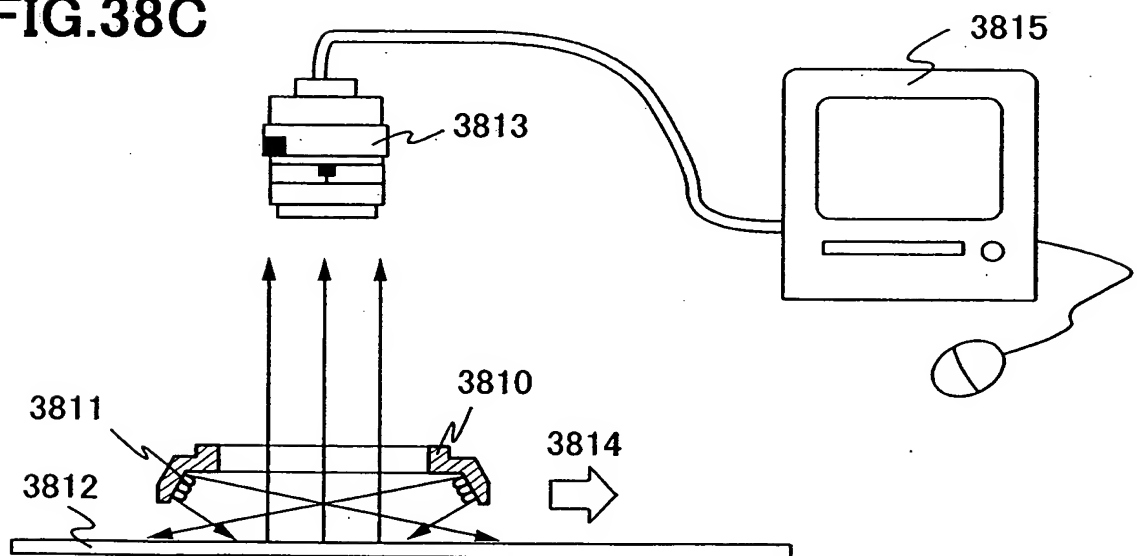


FIG.38C



EXPLANATION OF REFERENCE

101: substrate; 102: non-single crystal semiconductor film, 103: laser irradiation region, 104: CCD camera, 105: light source for light-exposure, 106: beam spot, 107: large grain size region, 108: poorly crystalline region, 201: substrate, 202: non-single crystal semiconductor film, 203: laser irradiation region, 204: large grain size region, 205: laser, 206: optical sensor, 207: poorly crystalline region, 208: light source for light-exposure, 301: solid state laser, 302: solid state laser, 303: solid state laser, 304: substrate, 305: amorphous semiconductor film, 306: beam spot, 307: marker, 308: light source for light-exposure, 309: laser irradiation region, 310: exposed region, 400: substrate, 401: semiconductor film, 402: large grain size region, 403: poorly crystalline region, 601: large grain size region, 602: poorly crystalline region, 603: light, 604: substrate, 605: CCD camera, 701: laser oscillator, 702: irradiated surface, 703: slit, 704: optical sensor, 705: photo detector, 706: high pass filter, 707: output terminal, 800: substrate, 801: base film, 802: amorphous semiconductor film, 803: laser, 804: cylindrical lens, 805: large grain size region, 806: poorly crystalline region, 807: laser light, 808: reflected light, 809: semiconductor film, 810: gate insulating film, 811: gate electrode, 812: gate electrode, 813: resist, 814: source region, 815: drain region, 817: source region, 818: drain region, 819: side wall, 820: side wall, 821: resist, 822: resist, 823: LDD region, 824: LDD region, 825: p-channel TFT, 826: n-channel TFT, 827: insulating film, 828: insulating film, 829: wiring, 830: insulating film, 1200: substrate, 1201: source signal line driver circuit, 1202: pixel portion, 1203: gate signal line driver circuit, 1204: sealing substrate, 1205: first sealing material, 1207: second sealing material, 1208: connection wire, 1209: FPC, 1301: source side driver circuit, 1302: pixel portion, 1304: sealing substrate, 1305: first sealing material, 1306: connection wire, 1307: second sealing material, 1308: connection wire, 1309: FPC, 1310: substrate, 1311: switching TFT, 1312: current controlling TFT, 1313: first electrode (anode), 1314: insulator, 1315: electroluminescent layer, 1316: second electrode (cathode), 1317: transparent protective layer, 1318: electroluminescence element, 1323: n-channel TFT, 1324: p-channel TFT, 1331: coloring layer, 1332: light shielding layer, 1400: substrate, 1401: base insulating film, 1402: amorphous semiconductor film, 1403: laser, 1404: large grain size region, 1405: poorly crystalline region, 1406: photo detector, 1407: light source for light-exposure, 1408a: island-like semiconductor film, 1408b: island-like semiconductor film, 1408c: island-like semiconductor film, 1409: gate insulating film, 1410a: first conductive film, 1410b: second conductive film, 1411: resist mask, 1412: resist mask, 1413a: impurity region, 1413b: impurity region, 1414: resist mask, 1415: impurity region, 1416a: side wall, 1416b: side wall, 1416c:

side wall, 1417: resist mask, 1418a: high concentration impurity region, 1418b: high concentration impurity region, 1419: first interlayer insulating film, 1420: second interlayer insulating film, 1421a: wiring, 1421b: wiring, 1421c: wiring, 1800: substrate, 1801: arithmetic logic unit, 1802: ALU controller, 1803: instruction decoder, 1804: interrupt controller, 1805: timing controller, 1806: register, 1807: register controller, 1808: bus I/F, 1809: ROM, 1820: ROM I/F, 1821: CLK1, 1822: CLK2, 1901: display panel, 1902: printed wiring board, 1903: pixel portion, 1904: first scanning line driver circuit, 1905: second scanning line driver circuit, 1906: signal line driver circuit, 1907: controller, 1908: CPU, 1909: memory, 1910: power supply circuit, 1911: speech processing circuit, 1912: send/receive circuit, 1913: FPC, 1914:I/F, 1915: antenna port, 1901: display panel, 1903: pixel portion, 1904: first scanning line driver circuit, 1905: second scanning line driver circuit, 1906: signal line driver circuit, 1907: controller, 1908: CPU, 1909: memory, 1910: power supply circuit, 1911: speech processing circuit, 1912: send/receive circuit, 1914: interface portion, 1916: VRAM, 1917: DRAM, 1918: flash memory, 1919: I/F, 1920: control signal generation circuit, 1921: decoder, 1922: register, 1923: arithmetic logic unit, 1924: RAM, 1925: input means, 1926: microphone, 1927: speaker, 1928: antenna, 2101: chassis, 2102: support, 2103: display portion, 2104: speaker portion, 2105: video input terminal, 2111: chassis, 2112: display portion, 2113: keyboard, 2114: external connection port, 2115: pointing mouse, 2121: chassis, 2122: display portion, 2123: operation key, 2124: sensor portion, 2131: chassis, 2132:display portion, 2133: lens, 2134: operation key, 2135: shutter, 2141: main body, 2142: display portion, 2143: chassis, 2144: external connection port, 2145: remote control receive section, 2146: image receiving portion, 2147: battery, 2148: audio input portion, 2149: operation key, 2150: eye piece portion, 2201: passport, 2202: wireless IC tag, 2211: wireless IC tag, 2212: reader, 2213: antenna portion, 2214: display portion, 2500: substrate, 2502: base film, 2504: amorphous semiconductor film, 2506: catalyst, 2508: polycrystalline silicon film, 2510: barrier layer, 2512: amorphous silicon film, 2514: light emitted from light source, 2516: semiconductor film, 2518: reflected light, 2519: detecting element, 2520: large grain size region, 2522: poorly crystalline region, 2524: island-like semiconductor film, 2526: island-like semiconductor film, 2528: gate insulating film, 2530: gate electrode, 2532: gate electrode, 2534: wiring, 2536: wiring, 2538: terminal electrode, 2540: source region or drain region, 2542: source region or drain region, 2541: TFT, 2543: TFT, 2544: second interlayer insulating film, 2546: third interlayer insulating film, 2548: connection electrode, 2550: protective electrode, 2552: electrode which is connected to S/D region of TFT 2541, 2554: electrode which is connected to S/D region of TFT 2543, 2556: protective electrode, 2558: protective electrode, 2560:

protective electrode, 2562: protective electrode, 2564: wiring, 2566: connection electrode, 2568: terminal electrode, 2570: S/D electrode of TFT 2541, 2572: TFT, 2543: S/D electrode, 2574: semiconductor layer, 2574p :p-type semiconductor layer, 2574i: i-type semiconductor layer, 2574n: n-type semiconductor layer, 2576: sealing layer, 2578: terminal electrode, 2580: terminal electrode, 2582: device formation layer, 2584: light-receiving portion, 2586: amplifier circuit portion, 2588: substrate, 2590: electrode, 2592: electrode, 2594: solder, 2596: solder, 3701: area light, 3702: semiconductor film, 3703: photo detector, 3704: specular reflection light, 3705: diffuse reflection light, 3711: area light, 3712: semiconductor film, 3713: photo detector, 3714: specular reflection light, 3715: diffuse reflection light, 3801: area light, 3802: diffuser, 3803: half mirror, 3804: semiconductor film, 3805: camera, 3810: lighting device, 3811: LED, 3812: semiconductor film, 3813: photo detector, 3814: direction perpendicular to scan direction of beam spot, 3815: information processor, 8000: first substrate, 8002: insulating film, 8004: stripping layer, 8006: insulating film (base film), 8008: semiconductor film, 8009: laser, 8010: crystalline semiconductor film, 8012: first semiconductor film, 8014: second semiconductor film, 8016: resist mask, 8018: first insulating film, 8020: first insulating film, 8022: second insulating film, 8024: third insulating film, 8026: conductive film, 8026a: first conductive film, 8026b: second conductive film, 8028: conductive film, 8028a: first conductive film, 8028b: second conductive film, 8030: insulating film, 8032: conductive film, 8034: p-type thin film transistor, 8036: n-type thin film transistor, 8038: insulating film, 8040: conductive film, 8042: insulating film, 8044: element group, 8046: opening, 8048: first sheet material, 8050: second sheet material, 8052: third sheet material, 8054: first wiring, 8056: second wiring, 8058: third wiring, 8060: contact hole, 8062: semiconductor film